THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY.

JANUARY, 1849.

ART. I.—*On the Progress of Etherization.* By LUNSFORD P. YANDELL, M.D., Professor of Chemistry and Pharmacy in the University of Louisville.

It is only a little more than two years since Etherization was introduced into medicine; but such has been the enthusiasm attending the practice, that in that brief period it has extended to all countries, and been applied under almost every conceivable variety of circumstances, so that its statistics are already numerous and diversified. The beginning of a new year and of a new volume appears to be a fitting season for taking a retrospect of the practice, and for inquiring into its safety, and its value as a resource of the healing art. This I propose to do in the following paper. I shall present a brief report of the cases of disease, so far as I am able to gain access to them, in which it has been successfully employed, as well as of those in

which its use has been followed by fatal or injurious consequences, and also give the experience of the profession, up to the present time, respecting its value in obstetrics and its influence upon the mortality of surgical operations. In this way we shall be able to form an enlightened judgment concerning the safety and utility of the practice.

Such a review, if carefully and impartially made, cannot be otherwise than interesting to the practitioner, whose mind may still be in doubt as to the safety of the new remedies. Many such I know there are in the country—cautious men, who are deterred by the reported casualties from making trial of ethereal inhalations. They are waiting for more evidence, anxious to avail themselves of all improvements in the art, but doubtful of the propriety of using agents capable of destroying life so speedily.

A disease in which etherization was early applied was *Traumatic Tetanus.* A notice of the case was communicated to the readers of this Journal by Dr. D. W. Yandell in one of his letters from Paris. M. Pertusio, a surgeon of a hospital at Turin, caused a patient laboring under traumatic tetanus to inhale the vapor of ether on the 13th of Feb., 1847, shortly after the practice was introduced into the Paris hospitals. The muscular contraction was instantly overcome, and although the tetanic symptoms reappeared as soon as the influence of the ether had ceased, by continuing to apply it five or six times a day, the disease was finally subdued. On the 4th of March, the patient had passed a week without experiencing the slightest symptoms of tetanus.

In the London Lancet, for October 1848, a case of traumatic tetanus is reported by J. C. Lansdown, Esq., surgeon of the Bristol General Hospital, in which the inhalation of ether was successful. The attack followed amputation of the foot for disease of the tarsal bones. Ten days after the operation tetanic symptoms were developed. Ethereal inhalation was at once resorted to, and under its

influence the patient was able to open his mouth and take nourishment. Five days after the practice was instituted, he was unable to swallow the smallest quantity of fluid except when under the influence of ether. Three days afterwards, etherization being continued, the spasms began to decline, and in a fortnight he was able to open his mouth sufficiently wide to put out his tongue, convalescence going steadily on. Throughout the whole of this case, which persisted three weeks, the ether, remarks the reporter of it, "was the sheet anchor," affording, every time it was used, instant relief from spasms of intense severity.

In a third case, reported by Mr. Chalmers, Surgeon to the Liverpool North Dispensary, (Prov. Med. and Surg. Jour. June, 1847,) recovery ensued upon the inhalation of ether. The subject was a muscular young man, and three weeks after the invasion of the disease, the legs and thighs were so rigid as to require the exertion of all the power of the surgeon, added to the patient's own exertion to flex them on the abdomen; but under the operation of the ether he flexed and extended them himself with facility. The spasms were always allayed by it, and his only cry was that his attendants did not give him enough of it.

Mr. Hawkesworth, in the same journal, relates a case of the disease cured by this remedy. The patient was a boy 12 years of age. Other remedies having failed to overcome the muscular contractions, it was determined to administer ether. The narcotic effect was soon induced; in a few minutes the jaw fell, and the whole body assumed a relaxed and passive condition, so that the limbs could be moved about with the greatest ease. For some time he remained quiet, drinking a little water, and talking freely to those around him. Gradually however, in the course of an hour the spasms and rigidity returned, but not so violently as before. A second time recourse was

had to the ether with good effect, the patient during every successive application becoming more relieved. After the first trial of the ether his medicine consisted merely of an occasional aperient, which was found less necessary than before the ether was administered.

Mr. Hopgood, in the Medical Times of January 15th, publishes the history of a case of tetanus in a boy 9 years of age, resulting from an incised wound on one of the knuckles, successfully treated by the inhalation of ether.

A striking case of recovery from traumatic tetanus under the influence of *chloroform*, is reported by Mr. R. L. Baker, in the London Lancet of June the 3d. Five days after the crushing of a man's hand in some machinery tetanic symptoms appeared. The patient was conscious, but had lost all power of speech and deglutition. Every muscle seemed implicated in the spastic action, and but little hope was entertained of his recovery. No medicine could be given, and the attendants made ineffectual attempts to administer an enema. In this condition chloroform was administered on a handkerchief, and in about three minutes the muscles began to relax; for a short time he muttered incoherently, then answered two or three questions rationally, and finally sank into a sound sleep with the muscular system relaxed and free from convulsions. In about two hours the patient awoke, as if from sleep, with the free use of his limbs restored, and, asking to be assisted to the night chair, where he had a copious stool, entered into rational conversation with those around him. The tetanic spasms never returned with any violence, and a cure was effected.

Dr. C. A. Worthington relates (*Prov. Med. and Surg. Jour.*, April 19,) a case of traumatic tetanus in a boy aged 17 years, in which the chloroform was administered with striking relief, though the spasms returned, and the case terminated fatally.

Dr. S. C. Thornton (*New Jersey Medical Reporter*, Oct.,

1848) relates a case in which the use of Chloroform was signally successful—the only case of traumatic tetanus, he remarks, which, during a practice of twenty-eight years, he has seen cured. The subject was a stout Irishman, in the 24th year of his age, and the tetanic symptoms resulted from an injury on his foot, occasioned by wearing a tight boot. After bleeding, blistering, calomel and morphia, the patient was found in extreme agony, the spasms occurring every twelve or fifteen minutes. To allay these, chloroform and sulphuric ether were administered, and directed to be given alternately every hour during the night, in limited quantities, if circumstances should require it. The moment he came under the influence of ether he cried out, "I am easy now." The paroxysms were not only moderated, but the intervals between them were much longer. He continued ill two weeks; "took 410 grains of calomel, 25 grains of morphia, consumed 28 ounces of sulphuric ether, and 8 ounces of chloroform," but finally recovered.

Other cases of partial success with ether in this formidable disease are reported in the medical journals of the day. Where it has failed to cure, it seldom failed to induce sleep, and to moderate the violent muscular contractions, thus diminishing the torture of the last hours of existence.

A case of *Idiopathic Tetanus* is recorded in the London Lancet of February 19th, by W. H. Cary, Esq., in which chloroform effected a cure. The subject, a little girl, nine years old, complained one cold day of a cramp in her fingers, and shortly afterwards complete emprosthotonos supervened. Purgatives, large doses of opium and ether, and the warm bath were used with but little effect. On the sixth day the patient had nearly lost the power of speech and deglutition; the diaphragm was rigidly and painfully contracting, and she was becoming exhausted, when chloroform was given. In two minutes she was nar-

cotised, and remained in that state a quarter of an hour, when the spasms slightly returned, and the chloroform was repeated. A sleep followed that lasted two hours, at the expiration of which time a third application of the remedy was made, and she slept quietly till morning. She then rose quite well, and continued in that state.

The Boston Medical and Surgical Journal, of the 5th of April, contains the history of a case of *Convulsions* in a child, successfully treated by chloroform. Dr. H. L. Sabin found the patient, five months of age, laboring under most severe and unremitting convulsions. Respiration was much impeded, and there was strabismus of both eyes, with a constant spasmodic jerking of the muscles of the arms, abdomen and diaphragm. The surface was growing livid and cold, and a clammy sweat bedewed the face and temples of the little sufferer. Various antispasmodics had been used in vain, and Dr. Sabin resolved at once to administer chloroform. After a few inhalations of the vapour the spasms ceased, the breathing became free and easy, the pulse which had been absent from the wrist returned, and the surface grew warm. In about three minutes perfect consciousness was restored, the child was put to the breast, and, with a laxative to remove intestinal irritation, was soon as well as ever.

A case of *Puerperal Convulsions* is related by W. J. White, Esq., (*London Lancet*, March 5th, 1848,) in which chloroform exerted the most beneficial effects. The patent was thirty years of age, and in her second labor; when irregular pains had existed for about 24 hours, convulsions came on, which persisted for thirteen hours in spite of bleeding and the other remedies employed. A sponge containing chloroform was now held to the nose, and its effects were soon visible; in less than five minutes the woman became quiet and the convulsions ceased. Contractions of the uterus soon followed, and in an hour and a quarter from the first inhalation, the influence being kept

up the whole time, she was delivered of a male child, without having any recurrence of the convulsions. No untoward symptoms succeeded.

Mr. Fearn (*Med. Gazette*, Feb. 11th, 1848) has also given chloroform with like happy results in this appalling disease. During a whole day his patient had been insensible. The convulsions, which had been frequent, ceased almost immediately after chloroform was administered, and when completely under its influence she was delivered with the crotchet.

Mr. Clifton, in the same journal, reports a case of puerperal convulsions in which chloroform was equally efficacious. From the most violent convulsions the woman fell into a tranquil sleep under its action.

In the New York Journal (July, 1848), two cases of this disease are referred to, in which this article was used with success. In the first, the paroxysms did not reappear after the inhalation of three drachms of chloroform; and in the second they were superseded during an instrumental delivery, and returned much mitigated, only upon being excited by the noise and confusion of a crowded humble dwelling.

An interesting case of puerperal convulsions treated by chloroform, is reported by Dr. White, in the September number of the Buffalo Medical Journal. The woman was of full habit and in her third pregnancy; the convulsions succeeded each other with great rapidity. As her face was flushed and her pulse full, she was freely bled; preparation was then made for delivering the child, and wine of ergot given to secure contraction of the uterus. Chloroform was administered, in the hope that it might lessen the agitation of the patient during the process of bringing the child away. The convulsions subsided, and delivery was effected without difficulty. On examination, it was found that she was pregnant with a second child. During the delivery of this, the mother inhaled chloroform and

remained quiet. But little hemorrhage followed. From the time that she was seized with convulsions, she had no recollection of anything that occurred until after the birth of her second child. Both mother and children did well.

In *Hysteria*, ether has been employed with good effect. A case is mentioned in the London Lancet, July 1847, in which extremely obstinate symptoms yielded promptly to it. In one of the attacks, Mr. Wilkinson was called to see the woman and had recourse to ether. The arms were still in one minute after the inhalation commenced, and in another, all spasmodic action was arrested. Sleep soon afterwards ensued, and continued for nearly eight hours, the spasms not recurring when she awoke. Two or three days afterwards another attack came on, but was speedily subdued by the inhalation of ether.

Spasmodic Asthma is another affection in which this practice has been attended with happy results. Mr. Greenhalgh (*London Lancet*, Dec. 4th, 1847,) had a patient subject to severe attacks of the disease, which usually were of some duration, and from the effects of which he was several days recovering. In one of these attacks he administered chloroform, under the influence of which the man almost immediately fell into a profound sleep, awaking without any of the usual consequences of the attack.

In the Medical Gazette, Dec. 1847, Mr. Chandler reports the case of a woman fifty-six years of age, who had been subject for twenty years to attacks of spasmodic asthma, for the relief of which "the resources of the Pharmacopœia had been exhausted in vain." On the 6th of Dec., having had the influenza, prevalent at the time, she was attacked by her old complaint, extreme dyspnœa, with great sense of constriction, and acute darting pains through the chest and epigastric region. She was placed under the influence of chloroform, and all indications of suffering soon disappeared. After a

quiet sleep, she sat up and took some food, and had no return of the paroxysm. What renders the case more interesting is the fact, that she had tried the vapor of sulphuric ether, sometime previously, not only without success, but with much increase of her sufferings.

In a case of *Bronchitis* mentioned in the same number of the Lancet, chloroform was employed with the effect of overcoming a most troublesome symptom. A lady, aged about fifty, in whom all the acute symptoms of the disease had been removed by appropriate treatment, experienced great restlessness and sleeplessness, with some cough. These were so troublesome that for three nights she had obtained no sleep whatever. She could not bear any kind of opiate. Under these circumstances Mr. Brown, her medical attendant, placed half a drachm of chloroform in a sponge to her nostrils. The effect was almost immediate, and she had two hours of most refreshing sleep. Afterwards she had good nights, and remained free from the symptoms mentioned.

In some cases of *Dysmenorrhœa*, chloroform has been found a valuable agent. Dr. Bennet (*London Lancet*, Feb. 1848) relates the case of a young lady whom he was attending for an affection of the cervix uteri, in whom menstruation was always very painful, and accompanied by great mental and physical depression. Chloroform afforded her great relief. It was beneficially used also at the next period; and in another lady in much the same condition of the first, the use of the chloroform mitigated the pains to a very great extent.

Chloroform has also been used beneficially in *Chorea*. Mr. Harris reports a case of cure in the London Lancet for June. The patient was a female in her seventeenth year, and was predisposed to the complaint by a chlorotic state of the constitution. The immediate cause of the attack was fright. The ordinary remedies were tried, embracing purgatives and mineral tonics; but at the end of ten days

there was no perceptible evidence of improvement. On the contrary, the involuntary muscular movements of the extremities especially, as well as those of the face—causing the countenance at times to be hideously distorted—continued rather to increase, and were attended by a state of watchfulness by day and night, which opiates did not allay, and which contributed not a little to her exhaustion and suffering. The chloroform was used every day for a week, preserving its influence with her on each occasion for about half an hour, when the muscular movements became almost magically arrested, and a calm sleep was induced. On awaking, the muscular excitement was renewed, but in a decidedly mitigated degree. Her nights became quiet, and she began to improve. Under the use of chloroform twice daily, an hour each time, together with the remedies before employed, in the course of a fortnight she became perfectly convalescent.

In *Mania, and Delirium Tremens*, chloroform and ether have both been used with advantage. Dr. Boyd (*London Lancet*, Aug. 14th, 1847) relates cases of mania, chronic and acute, in which he tried the inhalation of ether with benefit. The tranquillizing effect was produced at various intervals of from two to ten minutes, at a time when the patients were unusually violent. They all appeared to become intoxicated, but before this effect was fully induced, their anger subsided. Dr. Skae, physician to the Royal Edinburgh Asylum, reports that chloroform was used in that institution immediately after the discovery of its anæsthetic agency, and that he has found it to produce the same physiological effects upon the insane as upon the sane, the most violent and excited being almost immediately put into a state of calm and profound repose by its influence. As a curative agent he has seen no benefit from it, but is not without hopes that in a certain class of cases it may be of use.

Delirium tremens has repeatedly been treated suc-

cessfully by this method, when all other treatment had failed. Dr. Anderson in the New York Annalist, relates a very severe case which had resisted for several days the influence of opiates, purgatives, blister to the nape, ice to the head, &c. At length ether was administered, and although he resisted at first, after five minutes he became perfectly passive. The sponge was removed, and in five minutes he again grew restless and delirious. Again the inhalation was renewed, and in five minutes he was once more under the influence of the ether, which now continued for from eight to ten minutes; and when the effects passed off, he remained more calm, although not intelligent, nor apparently inclined to sleep. After another application, he dozed for four hours, then took a pill of morphia, fell asleep shortly after, and did not awake for six hours, when he was found to be perfectly rational, saying that he felt himself quite well.

A similar case is related in the Boston Medical and Surgical Journal. The usual treatment having failed to induce sleep, and the patient having become much exhausted, trial was made of ethereal inhalation. The patient was refractory and had to be held by assistants. After inhaling the vapor for about twenty-five minutes he fell asleep, and passed from this state of artificial sleep, without waking, into a quiet, deep and untroubled slumber, which continued four hours and a half. On waking, he appeared perfectly rational, and had no return of his delirium. Other similar cases are reported in the London Lancet. In an aggravated case, chloroform brought on sound sleep in ten minutes, and the patient, a woman forty-five years old, was entirely relieved by its application at intervals for two hours. A man, 47 years of age, who had frequently been attacked with delirium tremens, was delirious and almost incontrollable. A drachm of chloroform having been exhibited by inhalation, in two minutes

he dropped off into a quiet sleep, which continued for twenty minutes, when he awoke calm and rational.

A case of *Hydrophobic Mania*, successfully treated by chloroform is reported in the London Lancet, (Oct. 1848) by R. Y. Ackerly, Esq., of Liverpool. A laborer, thirty years of age, of a phlegmatic temperament, and peaceable, sober habits, was discovered suddenly to grow irritable towards his fellow workmen. Ten years before he had been bit on the leg by a rabid cat, and the wound had been cauterized by a hot iron at the time. His nights became restless; he was dispirited and expressed a fear of losing his senses; occasionally mentioned the bite of the cat, and attributed his illness to this cause. His mind became more disturbed; he fancied that he saw a cat constantly in the room; was continually wiping a viscid saliva from his mouth; refused drink, and when spoken to tried to hide himself under the bed clothes. Mr. Ackerly endeavored in vain to banish the idea of hydrophobia from his mind.

For three nights the patient was sleepless; he was sullen and refused to answer when spoken to; was feverish, with red tongue and constipated bowels; spasms of the muscles of his throat and extremities came on, and he became almost unmanageable. At this stage he inhaled chloroform, which put him to sleep in about three minutes. On awaking three quarters of an hour afterwards, he appeared more calm, recognised his wife and kissed and embraced her. A laxative was given, and in the evening he was quieter, but passed his urine and stools involuntarily.

The chloroform was again exhibited, with the same beneficial effect. The cerebral symptoms, however, returned about one in the morning, and at ten o'clock he was a perfect maniac; spasms of the limbs increased; conjunctivæ suffused; pupils dilated. He was once more subjected to the action of chloroform, and under its influence remained quiet during the day sleeping at intervals. The

chloroform was again used in the evening. Next morning he was worse again, but in the evening his symptoms improved, and under the influence of chloroform he passed a more comfortable night. For two weeks chloroform was administered occasionally, with tonics and stimulants, and at the end of that period he went into the country quite well, both in mind and body.

Several cases of *Hydrophobia* are reported in which chloroform mitigated the symptoms, but we are yet without authentic evidence that it has effected a cure in any instance. In the last published case, by Dr. Hartshorne, *(American Jour. Med. Sci.* Oct.*)* the inhalation of chloroform, persevered in at intervals, mastered the violent delirium and horror of the disease, as it had previously done in cases reported by Dr. Smiley and Dr. Stout. This, as remarked by Dr. Hartshorne, "removes at least one element of evil from the disease; and if any remedial agency can ever give hope of *cure*, it must be, when aided by other means, one which has such control over the symptoms, at tained hitherto by no other medicine." A case of cure has lately been published in the newspapers, but wants con firmation.

In the London Lancet (Jan. 1848) a case of *Typhus Fever* is reported in which Dr. Fairbrother used chloroform with advantage. A female, aged about eighteen years, in the Bristol General Hospital, exhibited all the symptoms of a bad case of that fever. The usual remedies were tried for a fortnight without any beneficial effect. The unfavorable symptoms continuing, the patient being delirious, and the system worn out for want of sleep, her life was de spaired of. Chloroform was administered in small quantities, and a soporific state was induced. In a few hours it was repeated, and the sleep which followed was prolonged. Under the influence of the remedy she passed comfortable nights and began to convalesce. No other medical treatment was adopted and the patient recovered.

Cases of *Neuralgia* have been relieved by chloroform. Mr. Gibson *(Med. Gazette*, March, 1848*)* reports several of the kind. One was that of a stout young butcher; the disease, which was of an intermittent character, had lasted twelve days. After he had inhaled the chloroform, much diluted with air, during nine or ten inspirations, he signified by holding up his hand that the pain had ceased He then raised his head, previously resting in the arms of an assistant, and became immediately, and for a few seconds, almost unconscious. The pain did not return.

In another case, that of a woman who had been subject to neuralgic pains in the forehead and temple for several years, the relief was complete. She inhaled chloroform, much diluted with air, for seventeen seconds. when she became sleepy, but not insensible, and perfectly free from pain..

Ether has been employed successfully in the treatment of the same disease. Dr. T. Smith *(Med. Gazette*, Oct. 1847*)* relates a case of the most obstinate character which yielded so far to this agent, that his life, miserable before, became "one of comparative happiness."

In the same journal is reported a case, in which the local application of chloroform afforded relief from pain of a neuralgic character. An aged person had been suffering, for ten or twelve days, under very acute pain from internal suppuration and disorganization of the eye, with pus in the anterior chamber; chloroform was applied directly to the eye, by means of the common chimney glass of an Argand lamp. A small piece of rag being moistened with the fluid, it was placed in a saucer over a cup of warm water, and the vapor thus directed solely to the eye; relief was almost immediately experienced, and after a very few applications she had no return of pain, comfortable sleep being also procured by the remedy.

A case somewhat analogous is related in the Boston Medical and Surgical Journal for March 15th 1848. A

man, in the month preceding, while collecting ice, plunged the hook with which he was hauling the blocks, into the fleshy part of the fore-arm, about midway from the wrist to the elbow, and over the radius. Tumefaction ensued, with excruciating pain when he attempted to move the thumb and first two fingers. Stimulating liniments were applied for several days to the painful part without amendment, when chloroform was resorted to. A drachm was slowly dropped upon his arm, which evaporated speedily without any manifest effect; but in the course of an hour all pain was removed, and he moved his fingers without difficulty.

In *Cholera*, I have suggested in another place, that chloroform is likely to become a resource of high value, and already the journals are furnishing accounts of its application to this disease. The last number of this Journal contained a reference to several cases of cholera treated by chloroform in England. The London Medical Times reports two other cases in which its action was strikingly favorable. The spasms and vomiting were violent, countenance livid, voice feeble. Chloroform was given internally, in brandy and water. An abatement of all the symptoms followed the first dose, and after a second, administered in two hours, the patients became comfortable, and fell into a quiet sleep.

Some other affections in which chloroform has been used with success, are *Hooping-Cough*, *Colic*, *Earache*, *Headache*, and the passage of biliary and urinary calculi, cases of which might be cited; but having, as I suppose, said enough on this head, I will proceed next to inquire very briefly, into the state of etherization as it relates to Obstetrics.

At a late meeting of the Medico-Chirurgical Society of Edinburg, Professor Simpson read a long and detailed report on the use of chloroform in midwifery. He stated, that since November last, he had used it constantly, and

with the very best results. He also read reports on its employment from several practitioners of Scotland, showing that a vast number of persons had already been successfully delivered under its influence, with safety, and the saving of an incalculable amount of pain. At the same meeting Drs. Malcolm, Keith, Carmichael and others presented to the Society very favorable reports of their success with it, stating also that they had employed it constantly in their practice, and in all cases of labor.

Dr. Geo. N. Burwell, of Buffalo, in the Buffalo Medical Journal for November, gives the history of fifteen cases of labor, in which he used chloroform with satisfactory results. He insists upon caution in the administration of the agent, and prefers to bring his patients gradually under its influence. His plan is to exhibit it to a point short of producing unconsciousness, or interfering with the woman's exercise of her faculties, or voluntary muscles, and yet to the extent of so benumbing the pain as to render it tolerable.

The testimony of Prof. Murphy is favorable to the use of anæsthetics in midwifery. According to his observation, it does not interfere with the action of the uterus, unless given in very large doses, which is never necessary; it causes relaxation of the perineum and passages, and increases the mucous secretion from the vagina; it subdues the nervous irritation caused by severe pain, and restores nervous energy; it secures the patient perfect repose for some hours after her delivery; and finally, its injurious effects, when an ordinary dose is given, seem to depend upon constitutional peculiarities, or upon improper management.

According to Mr. Hearne, formerly House-Surgeon to University College Hospital, *(London Lancet*, Oct. 1848*)* patients confined under the influence of ether or chloroform make better recoveries, suffering less from afterpains and requiring less opiates, than if confined under or-

dinary circumstances. The testimony of Mr. Lansdown, Surgeon to the Bristol General Hospital *(Ibid.)* is to the same point. His experience up to the time of writing his paper had extended to 242 cases, 63 of which were natural labors, and in the whole number he had not seen one worse for the use of anæsthetics, but on the contrary many incalculably benefitted by their application. His experience is that ether increases the action of ihe uterus, while chloroform is negative in this respect, and it is therefore his practice, in cases of deficient action, to combine the two agents in the proportions of two of the former to one of the latter.

Dr. Nevins, an able and impartial observer, *(London Med. Gazette,* March 1848*)* reports 80 cases of labor under the influence of chloroform. Its application varied from ten minutes to sixteen hours and a half, and his experience so far, he states, is decidedly in favor of the safety and utility of its employment. The general description of the labors was, that the patients accomplished them in the usual time, but without the fatigue of ordinary parturition, and that they were entirely free from the exhaustion so commonly experienced afterwards. The hemorrhage was less than common in most cases, and the recoveries, with few exceptions, were unusually quick and favorable. Fewer children than usual were still-born, which is in accordance with the results of Gore's experiments, who killed rabbits, nearly at the full term of uterogestation, by the repeated inhalation of chloroform vapor, and then extracted the young from the uterus of the mother, alive. In the 80 cases reported by Dr. Nevins, eighteen were cases reqûiring turning or instrumental assistance. Six children only were still-born; of these, two had undergone craniotomy; one was a funis presentation; one was turned for placenta prævia; and the other two were restored by appropriate treatment. He concludes, therefore, that the child has "a better chance of life after

the employment of chloroform than without it, as it was usual to have a greater number of still-born children with such cases as had been reported."

Dr. Reed, (London Lancet, April 1848) on the contrary, maintains that chloroform has produced bad effects, and that the unfavorable cases are not reported. He refers to an institution in London, in which it had been employed in all cases of labor since its discovery. In one instance, he says, "a strong, healthy woman, the mother of several children, had been seized with hemiplegia *six or seven days* after the use of chloroform. It had been noticed, too," he continues, "that there had been more still-born children since the use of chloroform than previously. An eminent physician who had visited the institution to see the effects of chloroform had been prejudiced against it; the child in this case was born in a 'tipsy state.' In one case in which the woman had been in labor for forty-eight hours, she was kept under the influence of chloroform for twenty-eight hours—the child was still-born."

If nothing more forcible than this can be urged against etherization in midwifery, the practice is pretty certain to prevail. "Six or seven days" is rather a long period to allow the anæsthetic for inducing hemiplegia; and as to the number of still-born children, and the child born in a "tipsy state," the assertions are at variance with the observation of Dr. Nevins and the experiments of Mr. Gore just quoted. That children are occasionally still-born after the use of chloroform, cannot be a matter of surprise to any one who considers the character of the cases in which it is most apt to be administered—after a labor, for example, of forty-eight hours in which the agent was employed for more than half that time. Dr. Reed, while stating his fears in regard to the practice, admits its value in "difficult and turning cases," in which, he says, "he should always himself give chloroform, but not in natural cases, unless there was some good reason for its use."

Dr. Ashwell *(London Lancet,* March 1848*)* takes the same ground, and contends that chloroform ought never to be used in natural labor. Dr. Hodge and Dr. Meigs, the readers of this Journal are already informed, entertain opinions unfavorable to the use of anæsthetics in midwifery. Dr. Channing, up to the 16th of December 1847, had used ether in forty cases of labor, and uniformly with good results.* Dr. J. C. Bennett, of Plymouth, Mass., has used chloroform in nearly two hundred cases without the least evil result. He has found that it produces a more rapid dilatation of the os tincæ, and increases the expulsive uterine efforts, while the placenta is sooner thrown off, and the hemorrhage is less.† The experience of Prof. Wright, of Cincinnati, is equally favorable to etherization in obstetrics. Dr. Stewart of New York, and Prof. Moultrie, of Charleston S. C., also report cases in which it has been used with happy results.‡ In five of his cases, Prof. Wright remarks, he gave chloroform "to arrest *constant* pain, and to establish *alternate* contractions—to promote a more speedy dilatation of the os tincæ, and a greater relaxation of the vagina and perineum."

My colleague, Prof. Miller, informs me, that although he has not used chloroform in very many cases of labor, his experience as far as it goes is favorable to etherization.

It was to Surgery that etherization was first applied, and it is in that branch of the profession that our experience is the most ample and varied. There is no longer a doubt in the mind of any one, that patients may be rendered insensible by ether and chloroform to the most painful operations; unhappily, there is as little doubt that persons have died from the effects of these agents; and the question, therefore, is, to what extent have they affected

* Transactions Am. Med. Asso. p. 232. † Ibid. ‡ Ibid.

the mortality of surgical operations? This question I now proceed to consider.

In the letter of Dr. D. W. Yandell in this Journal, (June 1847) detailing the operations performed in the Paris hospitals up to the first of March in that year, it was shown that a smaller proportion of the patients died than formerly perished in the same hospitals, under the same operations without etherization. M. Burgieres (Ranking's Abstract, 1847) has made a similar investigation, and has published a table of 211 operations performed in the French hospitals, which also show a diminished mortality in the operations where anæsthesia was induced. Prof. Simpson has collected numerous statistics on this subject, and the conclusion at which he arrives is that the use of anæsthetics has diminished the mortality of surgical operations. In Dr. Snow's report of the operations at St. George's and University College Hospitals, the same result is shown. Mr. Curling *(London Lancet*, May, 1848*)* has also published on this subject, and his facts tell strongly in favor of anæsthetic agents in surgical practice. Of 73 cases of amputation of the thigh and leg, where the patients were rendered insensible, fourteen proved fatal, giving a mortality of about 19 per cent. Of 134 cases, where no anæsthetic measures were resorted to, fifty-five were fatal, giving a mortality of forty-one per cent., more than double that after their exhibition. Other statistics equally favorable are presented in the paper of Mr. Curling; and he concludes by stating his experience of the value of these agents in cases which surgeons encounter with peculiar apprehensions. These are operations upon persons reduced by previous illness or exhausting discharges. In such circumstances he has found that etherization helped to support the patient during the operation, and had an exhilarating effect upon the powers of life afterwards, caution being observed not to produce too powerful an effect upon the susceptible systems of such patients.

Mr. Humphrey, in the paper already quoted, states that his experience in the use of chloroform and ether extends to some hundred surgical cases, and that as to the former, he is not aware that its administration has been productive of any ill consequences in a single case. Ether was suspected of inducing bad results in one or two cases, but he is doubtful whether it is justly chargeable with them. Like Mr. Curling, he has observed chloroform and ether to act exceedingly well on delicate and enfeebled persons, the cases in which most is to be apprehended from the pain and shock of an operation; and the knowledge of this fact has induced him to recommend amputation in some cases where he would have been unwilling to submit the patient to the unmitigated pain of such a procedure. Although prepared for occasional fatal accidents, his observation of many patients has given him the conviction, that the average success of operations will be increased by their cautious and discriminate use. He has remarked, that there is less prostration followed by feverish reaction, after operations under these agents, and that patients continue to enjoy comparative freedom from pain for some time afterwards.

Mr. Lawrence, the distinguished surgeon to St. Bartholomew's Hospital, in a note to Dr. Warren of Boston, last spring, stated that ether inhalation had been employed in that institution, in all descriptions of operative proceedings, from the slightest to the most serious, between two and three thousand times without a single unpleasant result. Among the surgeons in this country who have employed and recommend the use of anæsthetics, may be mentioned the names of Dr. Warren, Dr. Horner, Dr. Mussey, Dr. Paul F. Eve, Dr. Brainard, Dr. John Watson, Dr. Buck, Dr. Pierson, Dr. C. B. Gibson, Dr. Mütter, Dr. Hayward, and my colleague Dr. Gross They have presented to the profession no statistics, so far as I am informed, touching the influence of these agents upon

the mortality of operations, but their experience with them has been eminently favorable.

The only remaining head of our subject to be discussed, is the dangers of etherization.

These are real. For some time after the introduction of ether inhalation, it was doubted by many whether the process was attended with any danger whatever. No one doubts it now. Fatal cases enough have transpired to convince the most skeptical, and, perhaps, to induce a degree of alarm in regard to the practice greater than is desirable. We will look into the recorded cases and see how far the fatal results are justly ascribable to the use of these agents. In this country, no case of death from ether is reported; the European journals contain reports of several cases. Chloroform is charged with the death of two individuals in this country; in England and France, it is charged with the death of at least nine. I will not attempt to present the cases in the order of time in which they occurred, but begin with one which has attracted much attention, and been very fully discussed—the *Boulogne case.*

Case I.—The subject of this case was a young woman, 30 years of age, well formed, in good health, except that she had been troubled with palpitation. She was injured by a fall from a carriage and taken to the hospital in Boulogne, and became the patient of M. Gorre, surgeon-in-chief. A splinter had penetrated her thigh in the fall, which had brought on suppuration and made a free incision necessary. She requested to be put under the influence of chloroform before submitting to the operation. A handkerchief was placed over her nostrils moistened with from fifteen to twenty drops, at the most, of chloroform. Scarcely had she taken several inspirations, when she put her hand on the handkerchief to withdraw it, and cried with a plaintive voice "I choke." Immediately the face became pale, the countenance changed, the breathing embarrassed, and she foamed at the mouth. In less than a minute after she

began to inhale the vapor the handkerchief was withdrawn; an incision was made into the thigh two or three inches in length, and a thin pointed splinter of wood withdrawn. "While this was going on, an assistant was engaged assiduously in efforts to resuscitate the patient. Frictions were used; cold water was splashed on the face; tickling the fauces, blowing air into the air passages, ammonia to the nostrils—every thing that it is possible to do in such a case, was tried during more than two hours." But all efforts were vain; the few inspirations during that brief period, had been sufficient to extinguish life.

The autopsy was made 24 hours after death. Nothing remarkable was presented in the exterior aspect. The veins on the convex surface of the brain presented this remarkable peculiarity, that the column of blood was broken, every here and there, by bubbles of gas. When punctured these veins collapsed, owing to the escape of gas. Air was also found in the veins at the base of the brain. Numerous bullæ of air escaped with the blood from the ophthalmic veins, the cavernous sinuses, and the inferior cerebral veins. Air bubbled up in the midst of a remarkably black and fluid blood, from the internal saphena and the left crural veins. The lungs were visibly engorged The tissue of the heart was pale and easily torn; bubbles of air escaped from the liver and spleen, which were gorged with black blood and softened. The conclusion of M. Gorre is, that the patient died of syncope, caused by the sudden suspension of the cerebral functions under the influence of chloroform. He maintains that the air found in veins, must have been formed spontaneously in that situation.

This case came up at a sitting of the French Academy of Medicine, where it elicited remarks from the most eminent surgeons in Paris. Velpeau attributed the air in the veins to decomposition of the blood; and although there was what he styled "an unfortunate coincidence in this

case," he was not disposed to ascribe the fatal result to the action of chloroform. Few persons, I apprehend, will be inclined to regard the result in this case as a mere coincidence; and yet, as remarked by Velpeau, every surgeon knows that any operation, however insignificant it may be, can have a fatal issue. Thus, Civiale sounded a patient for stone and found a calculus in his bladder, but he was so nervous that the surgeon refused to operate. Sometime afterwards, however, as the pain occasioned by the presence of the stone became very great, Civiale was called in again, but he had hardly introduced the catheter when the patient suddenly died.

Case II.—The following case of *death by hemorrhage from the lungs after the administration of chloroform*, is from the London Lancet, (July, 1848.) The patient was a delicate, spare young man, studious, sedentary and abstemious. For some time previous to taking the chloroform he had felt a weakness about his chest, which frequently caused him to sink forward in the chair whilst reading, so much so that the book would fall out of his hand. He had no cough, but felt some uneasiness from what he considered to be a slight cold. He inhaled chloroform prior to having a tooth extracted, and all that day felt much excited, "with a peculiar rushing in the carotids." At eleven o'clock on the evening of the next day, the patient having felt for some time a burning pain in the back of the chest, the hemorrhage commenced, and about six ounces of fluid blood, of a florid appearance, and frothy from the admixture of air, was discharged. He was found by the medical attendants laboring under dyspnœa, very anxious, with blue lips and a jerky bounding pulse. He was bled, and took calomel, henbane and tartar emetic. Three days after the first attack the hemorrhage returned, nearly three ounces of blood being discharged in one gush, which was followed by fatal syncope.

The patient regarded the chloroform as the exciting

cause of the hemorrhage, and so it may have been; but this, I think, was the extent of its agency. It may have precipitated the crisis, but the condition of the lungs was one tending to hemorrhage, and the effusion, there is every reason to believe, would soon have taken place without the chloroform.

Case III—A fatal case is reported, (*Journ. des Connais. Med. Chirurg.*) as having occurred at Auxerre, on the 10th of July, 1847. The subject was a man aged fifty-five years, of a robust constitution, who was about undergoing an operation for the removal of a cancerous tumor. After inhaling ether two or three minutes considerable agitation was observed in the face and limbs; during five minutes more the inhalation was continued, and complete insensibility was established. The first incision was performed; but the dark color of the countenance having attracted the operator's attention, the pulse was felt, and the patient almost immediately expired. On dissection the brain, lungs, and heart, the liver, kidneys, and spleen, exhaled a strong odor of ether; the blood was dark and viscid, and the lungs were in their posterior parts, the seat of hypostatic congestion.

Case IV.—In the London and Edinburgh Monthly Jour. (June, 1847) a case is reported, in which the death of a boy followed soon after the inhalation of ether. Amputation of the left thigh was performed for compound fracture while he was under the influence of this agent. At the conclusion of the operation he was in a state of great exhaustion, and the intoxicating effects of the ether continued. The state of the sensorial powers was alternately one of excitement and depression; at one time resembling delirium, at another, approaching syncope, and again like violent intoxication. He died three hours after the operation.

Case V.—The American Journal of the Med. Sci. (April, 1848,) notices a case reported by M. Piedagnel to the Medical Society of Emulation, June 2, 1847, in which he

did not hesitate to attribute the fatal termination to the use of ether inhalation. A patient was admitted into his wards with a slight cough and uneasiness. One of the residents made him respire the vapor of ether on three consecutive days, without producing insensibility, as he proposed extracting a tooth. The first day the inspiration was continued for twenty minutes, the second day thirty minutes. Finally the patient determined to have the tooth extracted without etherization. He was afterwards attacked with loquacious delirium and died. The autopsy showed that he had intense arachnitis, which M. P. did not hesitate to ascribe to the ether.

Case VI.—In the case next to be noticed, death followed the inhalation of chloroform. Dr. Meggison relates (*Med. Times*, Feb. 5th, 1848,) that a girl of fifteen had been suffering for some time with onychia of the left great toe, the matrix appearing to be extensively involved. On consultation with his assistant, it was deemed absolutely necessary to remove the whole of the nail and matrix. A similar operation had been performed on the other great toe a year previously while she was under the influence of ether, and her report was that she felt no pain nor inconvenience from it except a severe headache afterwards, and great uneasiness during the inhalation from irritation of the fauces. Dr. M. assured her that she would feel none of that inconvenience from the use of chloroform, and that in the cases in which he had used it the headache, if any, had been transient. The whole of the day previous to the operation she had been fretting much, and apparently dreading it, crying continually and wishing she were dead rather than submit to it. In this state she was found by the surgeons when they went to perform the operation. They endeavored to console her and calm her fears, assuring her that she would not feel it, and urging her to be more collected, but in vain. She sat down in the chair sobbing. A teaspoonful of chloroform was poured on a

handkerchief, and she inhaled the vapor quietly for about half a minute, when, no stertorous breathing or change of appearance supervening, the nail and matrix were removed with one sweep of the knife. The patient kicked out, and the surgeon thinking the chloroform not sufficiently potent was proceeding to apply more to the handkerchief when her lips, which had been previously of a good color, became suddenly blanched, and she spluttered slightly at the mouth as one in epilepsy. Cold water and brandy were immediately given, but there was not the slightest attempt at rallying, and in a minute more she ceased to breathe. A vein in the arm was now opened, as also the jugular, but no blood would flow. The whole process of inhalation, operation, bleeding, and death did not occupy more than two minutes. On the autopsy congestion of the lungs was found, but whether this or the shock to a peculiarly susceptible nervous system was the cause of the fatal issue, was not clear to the mind of Sir John Fife, the surgeon who made the examination. But while admitting that the catastrophe was attributable to the inhalation, he went on to say, that such was his opinion of the effect of chloroform in lessening human suffering, and the small degree of danger attending its application, that if he were himself required to undergo an operation, he would have no hesitation whatever in taking it. "I have been using chloroform," he adds, "three or four times a week, ever since its efficacy in relieving pain was published, and I have never seen bad effects from it. In one instance, that of a woman, who had to submit to the removal of a tumor, weighing about three pounds, and distributed over a surface about a foot square, Dr. Glover and I administered about eight times the quantity of chloroform that was used in the case of the deceased. She recovered quickly, and was not worse after the operation than might have been expected from its formidable character. I have used it frequently in amputation, lithotomy, and a great many

severe surgical operations, and never knew any bad consequences arise from it. I attribute the fatal effect of the chloroform in the present instance to peculiarity in the constitution of the young woman."

Case VII.—A fatal result from the same agent is noticed by Dr. Robert Jamieson, in the London Medical Gazette, (Feb. 1848,) the subject being a druggist's apprentice who had been in the habit of inspiring the vapor for the sake of the pleasurable sensation created by it. On the 8th of February he had been observed, when weighing out an ounce of chloroform, to be holding his handkerchief to his mouth, and to become soon after somewhat excited. A boy who was with him alone in the warehouse saw him proceed to a retired part of the shop, where, leaning his body forward on a counter, and stooping his head, he seemed to be inhaling the vapor from some folds of his apron, which he had applied to his mouth and nostrils. Some person connected with the establishment came in at the time, and seeing him in this position, and apparently snoring, tapped him on the shoulder and said "what are you doing asleep at this time of the day?" Receiving no answer, the boy told this person that Walker had been again at the chloroform; on which they determined, as had been formerly their custom, to send for his father to take it from him, as on such occasions they had found that no other authority had any control over him. No one went near him until about *twenty minutes after this*, when his father arrived, and he, on lifting him up from the counter, on which his body was bent forwards, found him to all appearance lifeless.

Case VIII.—A death occurred at the Beaujon hospital, in June last, during the inhalation of chloroform, and the facts of the case are reported in the London Lancet for the August following. A young man, twenty-one years of age, was admitted into the hospital for a severe fracture of the shaft of the femur, caused by a ball which had traversed

the limb from before backwards. Disarticulation of the thigh was decided upon. The patient was put under the influence of chloroform; in a few minutes there were a few convulsive movements pointing to the period of excitement, and soon after a complete state of relaxation came on. A large anterior flap was then made without the loss of blood. The patient at this moment awoke, and M. Robert, the surgeon, desired that more chloroform should be given, and continued the operation. Hardly a quarter of a minute had elapsed, when a loud stertorous breathing was heard, and the apparatus was withdrawn. The patient's face was extremely pale, lips blanched, and the eyes, the pupils of which were greatly dilated, were drawn so high upwards as to be hidden by the upper lid. The operation was immediately suspended; and on examination it was found that the patient was nearly pulseless, all his limbs were in a state of relaxation, and the breathing was heard at long intervals. Frictions, irritation of the pituitary membrane, forced movements of the arms and of the ribs, were resorted to; several times the respiration seemed to become more vigorous, and the pulse more distinct, but this was but a momentary improvement, and it was but too apparent, after three-quarters of an hour of inadequate efforts on the part of the persons present, that the patient had ceased to exist. The sudden paleness of the skin, and the annihilation of the pulse evidently pointed to syncope; and as the latter cannot be ascribed either to hemorrhage or a protracted operation, it must be concluded that syncope was the immediate result of the inhalation of the chloroform. At the same time, the deep dejection and despair in which the patient was plunged, as well as the special kind of wound which he had received, and the stupor and shock consequent upon it, should be taken into consideration.

Case IX.—The London Medical Gazette (July, 1848,) contains the particulars of a fatal case, which occurred at

Hyderabad, in India. A young woman of a timid disposition, about to submit to amputation of the middle finger, inhaled the vapor of chloroform from a pocket handkerchief. She coughed a little, and then made a few convulsive movements. These having subsided, the necessary incisions were made, which did not occupy more than a few seconds. Scarcely a drop of blood escaped. The patient was then put into a recumbent posture with the head low. Active means were taken to bring her out of the state of coma, into which she had apparently fallen, but without success—the woman never breathed again. The death seemed to be almost instantaneous; for after the convulsive movements above described, remarks the surgeon, "she never moved, nor exhibited the smallest signs of life."

Case X.—In the American Journal of the Medical Sciences, (Oct. 1848,) is a brief reference to two cases reported by Mr. R. O. Johnston in the Provincial Medical and Surgical Journal (July 1848) in which death followed the inhalation of chloroform. One man was in convulsions for forty-eight hours after the operation, and afterwards expired. No particulars of the other case are given in the American Journal.

Case XI.—A case which has made a deep impression upon the public mind is one reported in the London Medical Gazette, (July 1848) and is as follows: Samuel Badger, Esq., Solicitor of Rotherham, Yorkshire, applied to Mr. Robinson, one of the most skilful dentists in London, and who has had the most extensive experience in the use of anæsthetic agents, to have some teeth extracted. A drachm and a half of chloroform was put on the sponge of the inhaler; the instrument was not held close to his face; he had inhaled the vapor about a minute when it appeared to have produced so slight an effect that he requested to have the agent renewed. Before this could be done, however, the head and hand of the subject were seen to

drop, that is, in one second after he had spoken to the operator. A period of about *five minutes* elapsed from the time of entering the house of the surgeon to his death. Shortly after death, his face was livid, the pupils dilated, and the temperature of the body lower than natural. The autopsy revealed some disease of the heart, and great enlargement of the liver, which, no doubt, predisposed to the fatal action of the chloroform; and yet the appearance of the young man was healthful, and according to the testimony of the father, he had suffered from no difficulty of breathing, nor any other apparent disease. The dentist had administered anæsthetics in at least three thousand cases, and saw nothing in the appearace of Badger to contra-indicate their use.

Two well authenticated instances of death under the immediate influence of chloroform are afforded by the history of etherization in this country, one of which took place at Cincinnati and has been so often referred to, that I deem any further notice of it here unnecessary. The other case occurred in New York, and the following facts relating to it appeared in evidence before the Coroner's jury.

Case XII.—Patrick Murphy, an Irishman, laboring under fistula, was operated upon by Dr. Parker, who previous to the operation administered to him chloroform. The operation was unattended with pain, the patient after it was over inquiring whether the surgeon was done. In a short time afterwards he was able to walk home, and continued to improve for three weeks, when a second operation was performed to open a sinus not touched in the first. Previous to this operation, Drs. Beers and Rotton, who performed it, dropped upon a sponge about thirty drops of chloroform, and caused the patient to inhale it. The operation was completed in about a minute, and while it was in progress the patient showed signs of pain, by placing his hand upon the part operated upon. In a mo-

ment his pulse, which was full and natural, sank; and though stimulants and frictions were applied and the temporal artery opened, he did not revive; no blood flowed; life was extinct.

The post-mortem examination revealed tubercles and abscesses in the lungs; a heart enlarged, pale and soft, and a softened condition of the mucous membrane of the stomach. Dr. Wood, who made the dissection, gave an opinion that there was sufficient disease of the lungs to cause death, but could not say that the chloroform had hastened it. The verdict of the jury was, "that Patrick murphy came to his death by disease of the lungs. The jury are unable to say whether the inhalation of chloroform in this case, or the excitement of the operation was the immediate cause of death."

These are all the instances of death from chloroform and ether, fourteen in number, of which I have been able to find any account in the journals to which I have access, though I am aware that many more are reputed to have occurred. In fact, as early as November, more than a year ago, and less than a year after the introduction of anæsthetics, Blandin, *(Gazette des Hopitaux)* stated that twelve fatal cases had been traced to the inhalation of ether. In the absence of a history of the several cases, it is, of course, impossible to say how far the ether in each instance was justly chargeable with the fatal issue. Nothing can be made of so vague an assertion beyond the naked fact, now no longer controverted, that the inhalation of this substance is attended with danger and may destroy life.

In eleven of these cases chloroform was the agent administered; and in three, death followed the use of ether. If we reject *Case* II, as one in which chloroform probably acted merely as an *exciting* cause of the hemorrhage; the Cincinnati case, as one of bad management, and the case of the druggist's apprentice, as one of sheer neglect; and if

we exclude also *Case* IV, and the case at *Beaujon* hospital, as due rather to the nature of the wound and the shock consequent upon it; and finally, if we set aside the cases of Mr. R. O. Johnston, and those of M. Blandin, as wanting in the details necessary to substantiate them, and the New York case, as induced by disease of the lungs, still there remain six cases in which I do not see how we are to avoid the conclusion, that the fatal issue—sudden, unexpected, apparently unavoidable—was due to the influence of these agents.

To sum up, then, the argument of the case may be stated thus:—In the Massachusetts General Hospital, up to the first of April, 1848, one hundred and fifty-four operations had been performed upon patients who had inhaled ether or chloroform; in the New York Hospital, thirty-seven operations had taken place under similar circumstances; in the Clinic of the University of Pennsylvania, thirteen; in the Clinic of the Jefferson Medical College, forty-five; and in the Cincinnati Hospital, sixteen, without a single fatal instance in one of those institutions. By most of our surgeons, these agents have been employed continually in their operations since their discovery; by many dentists they have been administered constantly in their practice; they have found warm advocates among our obstetrical practitioners, and have been extensively used in midwifery; and for amusement, boys in the streets, and people everywhere, have inhaled them, until the instances in which their effects have been experienced in this country, might now be counted by thousands. But among all these, we are able to point to but two fatal cases. Mr. Lawrence, when the practice had been pursued less than a year, stated that the trials with ether, in a single London hospital, had extended to between two and three thousand cases. One dentist in that city, up to the middle of July last, had administered anæsthetics more than three thousand times. The experience of Mr. Humphrey in the use of chloroform and ether had extended, months ago, as we have

seen, to some hundred surgical cases. In a lying-in hospital in London, chloroform has been resorted to in every case of labor since it was discovered. In the Paris hospitals, in less than two months after the discovery of the anæsthetic virtues of ether, it was administered to 211 patients, or more than 100 a month. Chloroform superseded the ether very soon after it was brought into notice, and has ever since been constantly employed by the surgeons of Paris. Velpeau says, "no operation is performed in the hospitals without it," and that the surgeon could not reject it if he would, for "the patients insist upon its use." Assuming that a hundred patients a month submit to surgical operations in Paris, we have about two thousand four hundred operations performed in that city alone under the influence of anæsthetics. In all parts of France chloroform and ether are in common use with the profession, and reports of success and failures with them are made to the periodical press of Paris; so that we may conclude, that the fatal cases attending the practice have generally been made known. Now in all these multiplied applications of the agents, in surgery, obstetrics, and dentistry, the number of deaths in England and France, justly ascribable to their influence does not, probably, exceed half a dozen.

I do not pretend to say that this number is insignificant; on the contrary I hold that it is large enough to "give us pause;" that the possibility of such a catastrophe should impose the utmost caution, and may well cause some anxiety in the mind of the practitioner about to apply these powerful agents. The proportion of persons in whom they excite unpleasant symptoms is certainly very small; but that there are such individuals, and that the most experienced surgeons have failed to recognize the idiosyncrasy in time; and then again the lightning-like rapidity with which the poison acts upon such constitutions, and the impotency of art, hitherto, in dealing with the poisonous vapor once introduced into the system, are circum-

stances which heighten his responsibility. It is no common poison with which he has to deal; one which allows time for the employment of antidotes, but enters at once into the circulation and goes to every part of the economy; and only "a few minutes elapse between apparently perfect health and the death of his patient."

But admitting the mischievous effect of anæsthetics to the full extent insisted upon by the enemies of the practice, the smallness of the mortality, it appears to me, must excite surprise, considering the nature of these agents, the length of time they have now been in use, and the extensive and very indiscriminate manner in which they have been applied. Two fatal cases in America, and five or six in Europe, out of "numbers almost numberless" who have inhaled them, is a result, indeed, that must awaken reflection, that should induce care, that will lead to an anxious inquiry into the circumstances of this fatality, and into the means of averting it in future, but assuredly is not one to bring etherization into disrepute. It has been well asked by one whose name is honorably associated with the novel practice, "Can antimony or opium show as clean bills of health for the same period?" Conceding the great activity of chloroform, the facility with which it permeates the system, —that it may overwhelm the powers of life in an instant— we allow to it nothing more than what is known to be true of strychnia and hydrocyanic acid, and, in a degree, of arsenic and morphia, remedies in every day use, and which we have learned to employ with confidence and comparative safety. If chloroform and ether have destroyed some lives, there cannot be a doubt that they have saved many more. We have seen what their influence has been upon the mortality of surgical operations. We have the testimony of a host of practitioners to their benign effects in obstetrical practice, in which, let it be noted, not a single fatal case has yet occurred. Their remedial application has been felt and recognized in many diseases, and every month

brings new proofs of their efficacy. The practice, we may therefore conclude, is not likely to decline, but rather to be perpetuated and extended.

I close this article by a few brief rules for the administration of these agents.

1st. Chloroform, though more active and therefore less safe, is, upon the whole, preferable to ether. In administering it, the physician should be on his guard against its *cumulative* effects. The patient is not necessarily safe because he does not feel himself entirely under its influence, as is shown by case XI. It penetrates more rapidly than ether, and at the same time is less volatile, and less transient in its action, and ought therefore to be introduced more slowly into the system. With due caution, I cannot help thinking fatal results may be avoided.

2d. The best mode of administering it is by a pocket handkerchief, pouring on a few drops of the liquid at a time, and watching the symptoms.

3d. If syncope occur, the patient should be placed in a recumbent posture, cold water splashed in his face, and the usual remedies in such cases, applied. It has been stated by M. Duval, that he has found essence of mint rubbed on the gums efficacious in cases of fainting.

In regard to the local application of anæsthetics, nothing of late, has been added to our experience. Frictions with chloroform are resorted to continually in rheumatism, neuralgia, toothache, &c., and we are daily hearing of instances in which the application was beneficial. Dr. D. W. Yandell administered chloroform to a child, in convulsions, a few days since with the happiest effect. Cases of colic, mania a potu, traumatic tetanus, earache, and neuralgia have been treated by chloroform, in this city, and the practice has been satisfactory, affording, in some cases, partial, and in others, entire relief.

Louisville, Dec. 16th, 1847.

ART. II.—*A Case of Colic attended with obstinate Constipation; Stercoraceous Vomiting; Recovery.* By JOHN P. DROMGOOLE, M. D., of Rutherford County, Tennessee.

On Sunday the 15th of October last, I was called to see Mr. T. C., whom I found laboring under, what I thought a severe attack of cramp colic, which came on soon after supper the evening before. His pulse was 90 and full; tongue coated with fur; complexion bilious; complaining of very severe pain in the region of the colon; bowels costive; surface of body cold and clammy; no swelling in the region of the pain; no tenderness upon pressure. I gave him 25 grs. calomel, combined with 15 grs. jalap, hoping it would produce an evacuation from his bowels, and relieve them of their irritating contents.

About 12 o'clock that night I was again called to him in great haste, and found all the symptoms much aggravated, his medicine not having operated. I gave him 15 grs. of jalap, and 20 grs. calomel followed by senna tea, which proved equally ineffectual. The pain being so excrutiating I gave him morphia, and used at the same time hot fomentations, hot salt, hot ashes, friction, &c., over the seat of pain, but all without any material abatement of the symptoms.

16th. Patient no better; symptoms even more alarming; vomits up large quantities of bile; medicine has produced no effect. I gave him large quantities of ext. colocynth in the evening followed by castor oil, senna, manna, gamboge, &c., without producing any effect upon his bowels. Just before night, ordered several simple injections but with no better results. Same night, ordered injections, of ext. colocynth, manna, olive oil, spts. turpentine, &c., but to no advantage.

17th. Patient's stomach very irritable; vomits something which very much resembles coffee grounds. Warm bath used, but with no relief to the symptoms. Blister to the

epigastrium, and venesection, under which his pulse became frequent and feeble. Towards midnight he became almost pulseless, his eyes sunken; surface bedewed with a cold clammy perspiration; very great pain in abdomen; convulsive movements of the limbs and body. Under stimulants he rallied a little before morning.

18th. Medicine has produced no effect on his bowels. The only medicine now used is morphia and opium. In the evening he commenced vomiting large quantities of stercoraceous matter, which increased till about 11 o'cock at night, at which time, while vomiting, he had an evacuation from the bowels.

19th. Patient much better; pain greatly alleviated, yet stomach very irritable; vomits every thing taken into the stomach, except small doses of sodaic powders.

20th. Complains greatly of his stomach; very much pain, pulse 100, full and strong; tenderness in the epigastrium. I applied a large blister over the region of the stomach, gave mucilaginous drinks, sodaic powders, &c.

22d. Patient much better; slept a little; stomach not so irritable; pulse 80 and not so full.

23d. To-day his abdomen became very tender upon pressure, and somewhat swollen; very offensive dejections from bowels. Applied a blister over the whole abdominal surface; mucilaginous drinks; sodaic powders.

24th. Patient is much relieved.

25th. Urgent diarrhœa commenced, and threatened to carry the patient off. Dejections watery and offensive; tongue foul; pulse 110 and weak. Administered calomel, chalk, acetate of lead, opium, kino, galls, &c.

26th. Diarrhœa unabated, and stools have become bloody; bleeding also from the gums and nose; bloody urine; involuntary discharges; extensive exhaustion. Ordered 1 gr. nitrate of silver every hour for six hours.

27th. Patient feels muc better though very weak, and almost pulseless; diarrhœa arrested; tongue becoming clean, some pain.

28th. Typhoid symptoms came on. Active and immediate stimulation resorted to and persevered in till the 30th, at which time he was a little better.

30th. Pulse 90, weak and regular, tongue a little coated and red on edges; some appetite, complains greatly of his back; abdomen sore; bowels too loose, but checked by the chalk mixture.

Patient has been gradually improving ever since, and is now walking about, though still feeble.

The above is certainly a remarkable case. The first question that naturally arises, is as to its pathology. What was the nature of the obstruction? Was it spasm, a stricture, a hernia, some foreign body in the bowel, or was it intussusception? I confess, a satisfactory answer has not suggested itself to my mind. Recovery has seldom taken place under a more alarming combination of symptoms—stercoraceous vomiting, convulsions, involuntary evacuation of bowels and bladder, bloody urine, and hemorrhage from the nose and gums. It may admit of doubt whether the active medication in the first stage of the disease was not prejudicial, and had not some agency in the development of the train of symptoms that succeeded. I should resort earlier to the lancet in a similar case, and, from the increasing testimony in its favor, should certainly make trial of chloroform as an anodyne, instead of relying upon morphia and opium. The doses in which I administered the nitrate of silver were large, but the result seemed to justify the practice; for the diarrhœa, which had proved intractable under all the ordinary astringents, yielded promptly to this remedy.

Millersburg, Nov. 27th, 1848.

REVIEWS.

Art. III.—*The Principles and Practice of Medicine.* By John W. Hood, M. D. Philadelphia: Thomas, Copperthwaite, &c. 1848. 8vo. pp. 263.

In these latter days "book-making" has become altogether the rage, and almost every one possesses the ambition of authorship. A prolific press hourly teems with the produce of the busy brains of the votaries of science, and volume follows volume with amazing rapidity.

These differ widely, of course, in value and importance. Some are "filled to the brim and running over" with matter at once original and useful; others are only a remoulding of old ideas and a reiteration of established doctrines and truths; while others still broach wild and startling theories having really no foundation, save in the fantastic brains of the authors, who seem possessed of some unlucky inspiration,

> "Which makes them, though it were in spite
> Of nature, and their stars, to write."

To which one of these classes this work most appropriately belongs, we now propose to inquire. We can best assist our readers in deciding, by giving a few extracts taken almost at random from its pages.

The style, we must premise, is rough and harsh in the

extreme; but while we consider it very desirable that the diction of every book should be pleasant, not to say elegant, we are aware that this is not one of the essentials. We often see, in our intercourse with the world, the kindest heart and the soundest head concealed under the roughest exterior; and in like manner, we cannot always estimate the real value of an author's materials by the homely garb in which they are clothed; and this homeliness we are more willing to overlook in this case, inasmuch as the writer lays no claim to anything but a diligent study of nature, and untiring researches in "Clinical Medicine" for the past thirty years.

The opinions of an individual who has been unceasingly engaged in studying pathology by post-mortem examinations, for nearly the third of a century, if they do not carry with them some degree of conviction, are at least, entitled to a fair and candid hearing. Dr. Hood has arrived at conclusions differing widely from the views, so far as we know, of all his professional brethren.

We intend, at this time, not formally to review his work, but rather, as stated above, to give a few extracts, which will serve as an outline of his notions in regard to the causes and treatment of many of the "ills that flesh is heir to."

According then to Dr. Hood, *displacemeant of the abdominal viscera*, should be ranked as *one* of the most frequent, if not *the most frequent* of causes predisposing or exciting, of disease and death.

That we may not be accused of misrepresenting the author in any way, we give the following sentences.

"These *displacements*" (i. e. of the mesentery) "*with those of the organs of the abdominal viscera*, I am fully convinced, from various dissections, are the source of *a numerous class of diseases*."—p. 11.

Again, we are told that the sigmoid flexure of the colon

becomes *displaced and descends into the pelvic cavity where it becomes "the cause of hemorhoids."* * * * "This sigmoid flexure of the colon has been, and in my opinion may be considered one of the principal causes of prolapsus uteri."—p. 16. * * * "Is it not strange that so much attention and laborious research should have been expended upon the cause of diseases originating in the abdominal cavity without even a reference to *the gravitation of the viscera of the abdomen and its fluids?*"—p. 18.

Chronic diseases of the viscera of the abdomen.—"For illustration, I have grouped together the following diseases for a summary consideration, viz:—Constipation, dyspepsia, chronic diarrhœa, gastritis, enteritis, peritonitis, gastro-enteritis, hepatitis, splenitis, and bilious colic, and predicate the opinion that *the most frequent source of all those diseases is misplacement or subsidence of the abdominal viscera.*"—p. 30. And then on the next page, he relates how he saw, on one occasion, a case of bilious colic which had resisted all the ordinary means and threatened to carry off the sufferer, cured by hanging him up by the heels: whereupon as if by magic "a quantity of gas escaped—a free alvine discharge was had from the bowels, and in twenty minutes the patient was entirely relieved."

But the list by no means ends here. See what he says of *strumous habit.* "*The bowels being permitted to gravitate*, is one of the principal exciting causes of the disease, and to a large class of chronic diseases, is a predisposing cause in some and and an exciting one in others."—p. 71.

Fever.—"This being clear it will be seen, *that the tendency of the viscera and fluids to gravitate*, with the altered respiratory movements, are fruitful predisposing and exciting causes of febrile action."—p. 105. "In the laborious research after causes, *the liability of the viscera of the abdomen and fluids to gravitate*, with their influence upon the respiratory movements, upon the blood, and upon the general system, have been misapprehended by the pro-

fession."—p. 107. "In my clinical pursuits I have observed *many cases of fever produced by the displaced condition of the small intestines and transverse colon.*"—p. 20.

Cholera.—"Bandages and supporters to prevent *gravitation of the viscera* and to assist the capillary vessels in returning the blood to the heart," are recommended as most valuable adjuncts in the treatment of this disease.—p. 167.

Hemorrhoids.—"Hence I am inclined to the belief that *the prolapsed condition of the sigmoid flexure of the colon is the primary cause of this painful malady.*"—p. 203.

Here we see the author gravely advocating the doctrine that constipation, dyspepsia, chronic diarrhœa, gastritis, enteritis, peritonitis, gastro-enteritis, hepatitis, splenitis, bilious colic, hemorrhoids, fever, prolapsus uteri, cholera, and strumous habit, have all, in the great majority of cases, for their primary and fundamental cause, *a prolapsed or displaced condition of some one or more of the abdominal organs.* After reading this terrible catalogue, there are few of our readers, we imagine, who will not join with the doctor in exclaiming, "I have been *astonished* at the number of diseases originating from displaced organs!"

For our own part we see no reason why the list may not with equal propriety be extended a little farther and take in erysipelas, cancer, dropsy, epilepsy, hydrothorax, pleurisy, pneumonia, hydrocele, orchitis, eczema, corns, bunions, ulcers, varicocele, &c., &c.

Entertaining views of this kind in relation to the *cause* of so many diseases, of course the *treatment* employed by the author will vary in some important particulars from the commonly accredited practice. Regarding a mechanical displacement of the bowels as the active agent in producing the malady, he sees that all the drugs from every quarter of the world, from the north and the south, the east and west, are insufficient of themselves to effect a cure;

that no remedy or combination of remedies directed in all the Pharmacopœias of

> "Every kindred tongue and tribe
> On this terrestrial ball"

will be able to return the stray bowels to their "native home." Accordingly, in addition to the treatment usually directed, he insists on hanging up the patient by the heels, and urges the importance, in a therapeutical point of view, of "supporters," "bandages," "rollers," and "pledgets" applied to the surface of the abdomen.

Thus—"In ordinary constipation," says he, "*I invert the body or elevate the hips occasionally, apply a supporter,* direct vegetable diet with bran bread, stewed fruits, &c. and regular and punctual attempts at stool, at a certain hour each day, with gentle exercise, aperients, alteratives," &c.—p. 45–6.

"Dyspepsia * * * is also to be relieved by mild aperients, diet, and *the application of suitable supporters or suspensory jackets.* But before the remedies are applied, the patient should *invert the body* for the purpose of restoring the organs to the place where nature intended they should perform their functions. If confined to the recumbent position, the object may be accomplished by elevating the hips and flexing the thighs upon the body for *fifteen minutes* every twenty-four hours or by *inverting the body one minute*"—p. 46. "In diarrhœa from constipation and gravitated viscera or fluids, *reverse the body* or elevate the hips so as to replace the bowels, and *apply a supporter* to prevent gravition."—p. 50.

When it depends upon acute or chronic inflammation of the intestines he directs the usual remedies.

"When they fail," says he, "I have been able to control the disease by a *flannel roller and pledgets.*"—p. 50.

"In acute or chronic inflammation," he repeats again, "I have found the *roller* an efficient agent."—p. 50. "*Bandages are as strongly indicated,*" pursues he, "in inflammation of the bowels, as they are in fractured limbs.—p. 51.

In chronic peritonitis, "*A suspensory jacket*" is directed in addition to other curative means.—see page 52.

Splenitis. "The treatment is pretty much the same as in the preceding diseases; viz—cupping, leeching, mercurials, tartar-emetic, ointments, laxatives, *supporters* &c. p. 52.

Strumous habit.—"The remedies therefore that will be found best adapted to the first indication are *suitable suspensory jackets or an abdominal supporter* to prevent the viscera of the abdomen from gravitating from their natural position and to enable the patient to take proper exercise in the open air."—p. 75.

Fever.—"If the fever arises from congestion, counter-irritants, friction, stimulants, revulsives, *bandages*, and dry cups of small size to put the fluids in motion are indicated."—p. 122. * * * "In others, it will require the use of *a roller applied to the extremities (so as to force a movement of the fluids in the superficial bloodvessels) assisted by* friction, bloodletting and warm brandy toddy to re-establish the circulation."—p. 125.

Cholera.—In addition to regulating "the secretions of the liver, stomach and bowels by the use of small and repeated doses of calomel and opium," we are directed to use "*bandages and supporters* to prevent gravitation of the viscera and to assist the capillary vessels in returning the blood to the heart."—p. 167.

"Those mechanical agents which I have found *absolutely necessary* to overcome congestion in cholera and check the profuse waste of the constituents of the blood by the morbid action of the skin and mucous membrane of the stomach and bowels, are as follows;—*the common muslin*

roller for the extremities; a flannel roller for the abdomen; pledgets for the colon; small dry or wet cups on the surface of the body; the lancet, gentle friction aided by elevating the hips for a few minutes after the patient has been over the clo e stool."—Page 168–9.

Hemorrhoids.—"*The indication*" (*i. e.* to remove the exciting cause) "*may be met as follows: by inverting the body or elevating the hips, or by a recumbent posture on the right side, while the body slightly inclines forward, and the thighs are flexed to restore the sigmoid flexure to its proper position. After which a supporter should be applied with its left inguinal cushion about an inch thicker than its ordinary size. This additional fulness at its inner margin will prevent the sigmoid flexure from descending again into the true pelvic cavity, and thus remove one of the principal causes of piles.*"—Page 207.

We should doubtless convey to the reader a mistaken idea of Dr. Hood and his book, if we closed our notice of the volume here. It gives us sincere pleasure, however, to say, that amidst this mass of rubbish, there are some valuable jewels. The chapters on "Prolapsus Uteri" and "Gout" seem to us, in the main, very sensible and judicious—as indeed do all other parts of his work not taken up by his *disco eries* in pathology and practice. But these sound precepts form in reality so small a proportion of the whole, that careless readers might readily pass them by without discovering them. One thing may be said of the author, which, we are sure no one can fairly deny, and that is, that he is profoundly original in his conceptions of the nature and treatment of a multitude of diseases. But then there are many cases in which originality is not by any means to be commended; and we must say that we think this is one of them.

The concluding paragraph is so rich a *morceau* that we cannot refrain from giving it to our readers. Here it is:

"When the organization of the vital laboratory, contain-

ed within the abdomen and chest for the manufacture of the blood, and the laws of the animal functions, normal and deranged, are clearly understood; and when it is known what depurating organs should be checked or incited, and what are the therapeutical indications, which nature demands, then man need not be hurried off by functional derangement, but may live to the age allotted by his creator."

"Laugh and grow fat" is an old and profoundly philosophic maxim. We are sure that these extracts have added full fifteen pounds of adipose tissue to every one of our readers. We only hope that it has not settled upon their bowels and by its superadded weight induced "prolapsus of the abdominal viscera." R. J. B.

Art. IV.—*Introductory Lectures. An Introductory Lecture* delivered in the Medical College of Georgia, at the opening of the annual session, Nov. 6th, 1848. By Joseph A. Eve, M. D., Prof. of Obstetrics and Diseases of Women and Infants.

An Introductory Lecture on the Coinciding Tendencies of Medicines. By Jared P. Kirtland, M. D., Prof. of Theory and Practice of Medicine, and Phyiscal Diagnosis in the Medical Department of the Western Reserve College, at Cleveland, Ohio.

An Introductory Lecture delivered to the class of Midwifery and Diseases of Women and Children, in Jefferson Medical College, Oct. 18th, 1848. By Charles D. Meigs, M. D,

The lecture of Dr. Eve treats of a variety of subjects, the most prominent of which is Medical education. He reviews, somewhat in detail, the various recommendations of the Medical convention in regard to preliminary education, the extension of the lecture-term, &c., and expresses a hearty concurrence in all the suggestions which look to the elevation of the profession. The tone of the lecture

is frank, earnest, and manly. Its author does not hesitate to speak of abuses wherever he finds them; but while inveighing against them with a generous indignation, he never loses sight of the charities of the christian, nor of the language that befits the refined physician.

We fully agree with Dr. E. in the following sentiments:

It would certainly be bad policy to place any obstacle in the way of those who would attend lectures—the more generally they are attended the better, the more general the diffusion of medical knowledge among the people the better for the profession, as nothing would so effectually suppress empiricism. If any preparatory education be required, let it be demaded of the candidate when he applies for a degree; let him undergo an examination to test his qualifications; for little dependence can be placed on certificates, especially when the certifiers are remote and unknown. It is well known with what facility certificates can be obtained, by any person and for almost any purpose. The system of certificates would favor the unprincipled and bear hard on the more conscientious;—let all be subjected to the same ordeal. Instead of requiring certificates to prove extrinsic and unimportant points, as age, time of reading, &c., let the colleges adopt every method by which to improve their courses of instruction, to afford the pupil greater facilities, more extended opportunities of acquiring knowledge, and then raise the standard of qualifications proportionally higher. We believe these the true principles of reform, the only method by which a reformation can be accomplished.

The subject of Dr. Kirtland's lecture is the "*Coinciding Tendencies of Medicines*," an idea for which he acknowledges himself indebted to Drs. Miner and Tully, whose work on Fevers, published about twenty-five years since, many of our readers have doubtless seen. He regards the subject as one of exceeding interest, though students do not relish the doctrine, "that prudence, and not boldness, should be exercised in treating the sick." Some of the

instances in which coinciding remedies may create factitious diseases, are referred to.

Thus, remedies will coincide if not adapted to the fulfilment of the indications; or if not adapted to the grade, or if not timed to the stage, or not proportioned in power to the amount, of the disease. They will coincide if employed under a false diagnosis, or if disproportioned in power to the amount of vitality remaining in the system. They will also coincide if not suitably qualified, or if their use be continued after they have accomplished certain changes in the system.

The following illustration of the coincidence resulting from a false diagnosis is given:

"A careless practitioner may mistake a fever and local disturbance, arising from worms, and teething, for peritoneal inflammation. He resorts to blood-letting and antimonials—they coincide; morbid irritability rages, and at length the brain sympathizes, and convulsions end the scene. Perhaps such a practitioner never considers how much he contributed to the result.

"Malaria, the cause of Fever and Ague, extends its influence over the west, and imparts peculiar tendencies to our diseases. Its effects are masked under the form of every ailment that occurs.

"In its irregularities, it more frequently manifests itself under the symptoms of a disordered state of the nervous system. One case may be neuralgia, another apoplexy, and a third, epilepsy, and so on through the list of nervous diseases. In one instance, it may appear as irritation, another inflammation, and another a compound of both.

A practitioner, not intimately acquainted with this subject, would, probably, at the first step make a false diagnosis, and before the expiration of two days of treatment, he would be surrounded by so many perplexities and anomalies, that he would be disposed to give up the case in despair."

The other propositions are illustrated by appropriate ex

amples, and the subject, so well treated, ought, we think, to have interested the pupils of the learned professor. We have read his lecture with great pleasure.

The lecture of Dr. Meigs is marked by the author's peculiarities of style, but contains all his elevation and vigor of thought, and strikes us as an eloquent and beautiful production. Whatever else the reader might deny its author, he would be sure, on rising from a perusal of this lecture, to concede to him genius, that loftiest attribute of mind. We quote a few passages, and should hardly fear to do so at random, for every page gives proof of that rare faculty. Take for example the following, in which he is contrasting Philadelphia as it was, and as it has become under the sway of the scholar.

"It is scarcely more than one hundred and fifty years ago—and the men that saw it are but just lately dead—that the spot upon which we stand was a dark primeval forest, the haunt of the moose, the deer, the wolf, and the fox.

"Here the Lenni Lenape man crept with bow and hunting-spear nearer and nearer to the wild beast, whose spoils constituted his wealth, and satisfied his imperious necessities.

"The man had a soul that was filled, as Milton says, with 'vain imaginations, phantasms, and dreams, distempered discontented thoughts, vain hopes, vain aims, inordinate desires.' He was sunk in gross ignorance and vice, and the darkness of night was spread over his lot, and that of his race.

"Some human sympathies had he, mayhap, at the sight of his wife or his new-born child; and some sensual pleasure, in the curling incense of his tobacco smoke, as it wrapped his senses in its anæsthetic cloud. But a dark fiery passion *ruled* his life, and war and revenge were his *ideal*. The scalp-pole, with the gory emblems of his strength and courage, or the bloody corpse of his enemy, lying stark and silent, cold and gashed before him, procured for the Man emotions the most to be hoped for in his then present evil world. Such was the Philadelphian.

"But now, in this short space that we are thinking of,

the bloody and cruel red man is clean gone out of our sight, and his record can scarce be found—the bramble and the thorn, the brake and tangled thicket, and the thousand-year-old oak, have given place to streets of palaces, the homes of a luxurious and refined civilization. The wild beast of the forest is no longer seen in his ancient lair, where the caparisoned horse bends his pliant willing neck to the rein; and the surly bear, and grim ferocious wolf, no longer gnash their teeth in paths where our little children pursue their toys in security. The lodge of the Indian is gone, and the marble hall is in its place. No more doth the scalp-pole lift its mournful trophy in the air, where the banner of the Republic throws out its stars and stripes to the winds that love to leap to the embrace of that beautiful and glorious emblem of our enlightened *liberty* and union, in which lie our strength and our happiness.

"Now is not this a marvellous change, to be effected, too, in so short a time! What was the necromancy that wrought it?

"Man was here then.

"Man is here now.

"What makes the difference—if we be, in truth, all alike, sons of the common Adam, father of men?

"What is it that hath swept away, as by a stroke of Merlin's wand, forest, and lodge, and wild beast, and wilder man, and planted in their stead a great and flourishing city, with its 380,000 Christian souls of its population,—abiding here in security and tranquillity, under wholesome and equal laws, the exponents of a true morality, and the guardians of it?

"We are here in the midst of plenty; we are surrounded with all the consolations of civilization. We have abundant markets; vast stores of corn, wine, and oil; streets cleansed, lighted and graded, and guarded; places of worship, magnificent libraries; public walks, and gardens and squares; hospitals and alms-houses for the sick and the wounded, the deaf and the blind, and the lame and the poor. Benevolent institutions rising up every day, and emulous to do whatever is possible for the amelioration of those who are ignorant, or vicious, or unfortunate; schools opened for all the children of the people, without fee or price; and to all this catalogue of good

things here enjoyed—a confident belief that the same advantages are to be kept in store for our children, and our children's children, for generations that are as yet unborn.

"Here are gathered together the innumerable gifts of commerce: whatsoever the arts have produced of useful or agreeable, are here placed within the reach of those who desire them for use or for pleasure.

"Now what is it that hath wrought this great and miraculous change?

"All this is the work of the Scholar; for it is he who has led his fellow-man out of the grossness and ignorance and depravity of his natural state—that has taught him arts and letters, and converted him, from being a savage, into the more elevated condition of the Christain and gentleman. It is the Scholar that has broken asunder the manacles of the woman, and freed her and disenthralled her, from being the bond slave of the man, his beast of burthen and the mother of his child, to take her station as his coequal companion. The Scholar is man's Teacher and Guide. He it is who struck the scales from his eyes, and opened his deaf ears, and unsealed his closed senses, and called upon him with his voice, and showed him by his example, the way in which he should walk; invited him to spurn the degradation and bondage of ignorance and depravity, and to come up and be partaker with him of knowledge, which is freedom, and of virtue, which is happiness.

"It is the Scholar who hath done all this, and none else could have done it."

Take, again, the following—

"Who planted the sleep-giving poppy in the garden of the world? Who raised the tall and graceful cinchonas on the slopes of the Cordilleras? Who lifts up and supports and draws out the gracile bending stem of the one, or upholds the rigid trunk of the other? Who constructed the capsule and unfolded the tender blossom, and commanded the sanative or the pain-compelling juices to stream through the tubes and gather themselves together for the weary, sleepless, hopeless sons of the children of men? Was this an accident? or was it out of design, a

remedy? Or are medicines appointed by the Author of the world, and you the ministers to employ and guide them? And did the *idea* of it exist before the root was buried in the ground? And you, young gentlemen, were you there too? Did that eye see you then as you sit before me now? Did He ordain the tympan and the semicircular canal that now hears my voice calling upon you, and appealing in vehement words, and a strong desire, that you should become indeed the missionary physician you were designed to be? Fulfil the precosmic idea of your nature and creation. Flee from every temptation that might draw you aside from the appointed possible track, and learn to know and to feel how honorable a thing it is to be a physician in deed and in truth—a messenger sent from above to earth, and by an absolute command ordained to the high vocation of the Scholar, and to the elevated ministry of the Iatrist."

We should suppose there is no reader who would not relish such poetry of thought and of language, even in an introductory lecture to a class on midwifery and the diseases of women and children.

Art. V.—*Principles of Zoology: Touching the Structure, Development, Distribution and Natural Arrangement of the Races of Animals, living and extinct;* with numerous illustrations. For the use of Schools and Colleges. Part I. *Comparative Physiology.* By Louis Agassiz and Augustus A. Gould. Boston: Gould, Kendall & Lincoln. 1848. 12mo. pp. 207.

We wish to call the attention of our readers to the work, the title of which we have given above, and to the series of which it is the beginning. The names of its authors are an ample warrant for the accuracy and ability with which the task will be executed; and as to the interest of the subject, we suppose there can be but one opin-

ion among educated men. Although the work before us is designed especially for "schools and colleges," it is one in which most readers will find much that is new to them; and the chapters on the geographical distribution of animals, and their distribution in time, will reward the attention of every class of readers. The characteristic feature of the work is, that while it is elementary, it is profound—that it is adapted to the capacity of the beginner, and yet is capable of interesting and instructing all but adepts in the science of which it treats.

We feel that we should be rendering a high service to our profession, if we could foster and stimulate among its young men a taste for the study of natural history. How intimately it is associated with medicine, and how happily it exercises and expands the faculties of the mind! It is a perpetual feast, to which the physician, wearied and worn out by the toils and anxieties of his arduous calling, may address himself with ever new delight. However other studies may exhaust, this never cloys or fatigues. Once entered upon, and a taste for it once contracted, it is sure to be pursued with increasing zeal, and with a reward felt by the curious and cultivated mind to be the one most above price.

The following is the beautiful conclusion of this admirable little work:

"From the above sketch it is evident that there is a manifest progress in the succession of beings on the surface of the earth. This progress consists in an increasing similarity to the living fauna, and among the Vertebrates, especially, in their increasing resemblance to Man.

"But this connection is not the consequence of a direct lineage between the faunas of different ages. There is nothing like parental descent connecting them. The Fishes of the Paleozoic age are in no respect the ancestors of the Reptiles of the Secondary age nor does Man descend from the Mammals which preceded him in the Tertiary age. The link by which they are connected is of a higher and im-

material nature; and their connection is to be sought in the view of the Creator himself, whose aim, in forming the earth, in allowing it to undergo the successive changes which Geology has pointed out, and in creating successively all the different types of animals which have passed away, was to introduce Man upon the surface of our Globe. Man is the end towards which all the animal creation has tended, from the first appearance of the first Paleozoic Fishes.

"In the beginning His plan was formed, and from it He has never swerved in any particular. The same Being who in view of man's moral wants, provided and declared, thousands of years in advance, that "the seed of the woman shall bruise the serpent's head," laid up also for him in the bowels of the earth, those vast stores of granite, marble, coal, salt, and the various metals, the products of its several revolutions; and thus was an inexhaustible provision made for his necessities, and for the development of his genius, ages in anticipation of his appearance.

"To study, in this view, the succession of animals in time, and their distribution in space, is therefore to become acquainted with the ideas of God himself. Now, if the succession of created beings on the surface of the globe is the realization of an infinitely wise plan, it follows that there must be a necessary relation between the races of animals, and the epoch at which they appear. It is necessary therefore, in order to comprehend Creation, that we combine the study of extinct species with that of those now living. since one is the natural complement of the other. A system of Zoölogy will consequently be true, in proportion as it corresponds with the order of succession among animals."

Art. VI.—*A Manual of Auscultation and Percussion.* By M. M. Barth and Roger—translated, with additions, by Francis G. Smith, M. D. Philadelphia, Lindsay & Blakiston, 1845. pp 160—12 mo.

This manual, which, as is set forth in the preface of the American edition, is a translation of the *resumé* of the so-

cond edition of Barth & Roger's work on auscultation, with the addition of a new treatise or Percussion by the same authors, cannot fail to be acceptable to the profession and particularly to the younger part of it in the United States.

A hand-book of this kind should be in the hands of every student, more especially as so little time is allowed in most of the medical schools of our country for the special study of the science of which it treats.

Not only is auscultation of daily and inestimable service in the diagnosis of diseases of the respiratory and circulatory apparatus, but it lends valuable aid to surgery, in the diagnosis of fractures; to midwifery, in the diagnosis of pregnancy; is applied to certain diseases of the brain, and not very long since was reported to have been practiced with the happiest results in inflammation of the peritoneum. The medical press has furnished us with the results of the labors in this department not only of many of our own physicians, in the shape of treatises and brief *Vade mecums*, but has added also reports and translations, until we need be at no loss for either monographs or compilations, home or foreign, on this subject. But among all these, we are acquainted with no work better calculated to fulfil the end which it proposes than the one before us. We are in the habit of recommending it to our students, and now extend the recommendation to the readers of the Journal.

D. W. Y.

SELECTIONS

FROM

AMERICAN AND FOREIGN JOURNALS.

Typhus and Typhoid Fevers.—By Joseph M. Smith, M. D., Prof. of Prac. Med. in Coll. Phys. and Surg., Chairman of Committee on Practical Med. A. M. A.

Of all forms of infectious diseases, the one from which the greatest amount of mortality has occurred in most of the larger Atlantic cities of the North-eastern and Middle States, during the committee's term of service, is typhus, or, as it has been generally called, ship fever.

Though typhus is not perhaps as strictly entitled to the term epidemic as some other distempers, being never equally rife in the different classes of society, but mostly confined to persons dwelling in confined situations, in the midst of human filth. yet its prevalence is sometimes so extensive, and its diffusion so clearly owing to the agency of a peculiar atmospheric influence, that there is no sufficient reason for not considering it as occurring epidemically. That it conforms to the law of periodicity, which determines the recurrence and spread of certain other maladies, is shown by its history in various countries. Pursuant to that law, though it may never be absent from a city or district, it increases at times, and after raging for a season, declines like other epidemics. Dr. Alison says, in speaking of the contagious fever of Edinburgh, that "there have been three great epidemics of that disease in the last twenty-two years, beginning in 1817, 1826, and 1836, (the last of which has now nearly subsided,) each lasting nearly three years, and each of the [illegible]

cond edition of Barth & Roger's work on auscultation, with the addition of a new treatise or Percussion by the same authors, cannot fail to be acceptable to the profession and particularly to the younger part of it in the United States.

A hand-book of this kind should be in the hands of every student, more especially as so little time is allowed in most of the medical schools of our country for the special study of the science of which it treats.

Not only is auscultation of daily and inestimable service in the diagnosis of diseases of the respiratory and circulatory apparatus, but it lends valuable aid to surgery, in the diagnosis of fractures; to midwifery, in the diagnosis of pregnancy; is applied to certain diseases of the brain, and not very long since was reported to have been practiced with the happiest results in inflammation of the peritoneum. The medical press has furnished us with the results of the labors in this department not only of many of our own physicians, in the shape of treatises and brief *Vade mecums*, but has added also reports and translations, until we need be at no loss for either monographs or compilations, home or foreign, on this subject. But among all these, we are acquainted with no work better calculated to fulfil the end which it proposes than the one before us. We are in the habit of recommending it to our students, and now extend the recommendation to the readers of the Journal.

D. W. Y.

SELECTIONS

FROM

AMERICAN AND FOREIGN JOURNALS.

Typhus and Typhoid Fevers.—By Joseph M. Smith, M. D., Prof. of Prac. Med. in Coll. Phys. and Surg., Chairman of Committee on Practical Med. A. M. A.

Of all forms of infectious diseases, the one from which the greatest amount of mortality has occurred in most of the larger Atlantic cities of the North-eastern and Middle States, during the committee's term of service, is typhus, or, as it has been generally called, ship fever.

Though typhus is not perhaps as strictly entitled to the term epidemic as some other distempers, being never equally rife in the different classes of society, but mostly confined to persons dwelling in confined situations, in the midst of human filth. yet its prevalence is sometimes so extensive, and its diffusion so clearly owing to the agency of a peculiar atmospheric influence, that there is no sufficient reason for not considering it as occurring epidemically. That it conforms to the law of periodicity, which determines the recurrence and spread of certain other maladies, is shown by its history in various countries. Pursuant to that law, though it may never be absent from a city or district, it increases at times, and after raging for a season, declines like other epidemics. Dr. Alison says, in speaking of the contagious fever of Edinburgh, that "there have been three great epidemics of that disease in the last twenty-two years, beginning in 18'7, 1826, and 1836, (the last of which has now nearly subsided,) each lasting nearly three years, and each of the last two affect-

ing, he believes, nearly ten thousand persons." Of the typhus of Glasgow, Dr. Davidson remarks "that a severe epidemic of one or two years' duration is never succeeded by another until several years have elapsed." Similar facts illustrate the epidemic character of typhus in other European cities.

On examining the records of deaths from typhus for the last thirty-five years in the city of New York, it is found that the disease was epidemic in that period four times, viz: in 1818, 1827–28, 1837, and 1846–47. In these years the increase of the disease was so remarkable, that there is no hesitation in pronouncing them epidemic typhus periods. The fact now referred to was strikingly exemplified in 1837. In that year the mortality from typhus was 338, while that of the preceding years was but 117, and that of the following only 104. From this time, though the amount of mortality annually varied, there was no notable increase of deaths from typhus until 1846, when the number rose to 256; and the disease continuing to prevail and with increasing severity, the deaths in 1847 reached the frightful sum of 1396, to which should be added very many of 657 deaths from dysentery, a disease which in a large proportion of the cases in the hospitals, was typhus fever.

The foregoing facts fully warrant the inference that the diffusion of typhus is favored by a peculiar aerial influence which occurs periodically. Such an influence is sometimes very widely extended. It is said by Barker and Cheyne, in speaking of the epidemic typhus period of 1817–18, as quoted by Dr. Davidson, that "it must be acknowledged that the simultaneous increase of the disease in Ireland, and on the Continent, leads to the inference, that whatever may have been its origin, an epidemic constitution prevailed over a great part of Europe during a series of years past." Now such an epidemic constitution has manifestly prevailed over the British Isles during the years 1846–47; and its influence, in its western direction, appears to have extended across the Atlantic ocean to the shores of our North-eastern States and the adjacent British Provinces.

But coincident with this wide-spread epidemic meteoration, were other causes more immediately influential in predisposing to typhus on both sides of the Atlantic. The

more efficient of these causes, especially in Ireland, were famine and the evils, physical and moral, attendant upon it. Whilst starvation and disease were destroying thousands of the poor in that ill-fated land, multitudes of them, to escape from calamities so fearful, sought to ameliorate their condition by a removal to this continent. In no annual period in the history of emigration, has the number of foreigners, added to our population, equaled that of the last year. It has been estimated that about a quarter of a million of emigrants arrived in the United States in 1847. Of this number, 160,134 landed at New York, and the remainder mostly at Boston, Philadelphia, Baltimore and New Orleans. Thousands also entered our country by the way of Canada and New Brunswick. A very large majority of those who landed at New York were Germans and Irish. It is stated by the New York commissioners of emigration, that of the 129,062 passengers arrived at that port, from May 5th to December 31st, 1847, 53,180 were from Germany, and 52,946 from Ireland, thus showing that the emigration from the former country exceeded that from the latter.

The condition of the German and Irish emigrants prior to their embarkation, and during their transit of the ocean, was in most instances conspicuously different. Whilst the former were generally robust, and well provided on the passage with the means of subsistence, and observant of cleanliness and ventilation,—the latter were in most cases enfeebled from want of sustenance, and on shipboard, destitute of supplies of wholesome food, depressed in mind, clothed in filthy garments, and crowded and confined in air rendered pestiferous by the excrementitious matters eliminated from their own bodies. In contrasting the hygienic circumstances in which the two classes of emigrants were placed, it is easy to account for the greater amount of sickness and mortality which occurred in one class than in the other. It is said, that of the admissions of emigrants into the hospitals and almshouse of New York, the Irish exceeded the German in the proportion of about one to nine or ten; and we are told, that the Irish in British ships suffered more than those in American.

The amount of disease and number of deaths which occurred in emigrant ships, while crossing the Atlantic, are appalling to contemplate. Many thousands perished on

the voyage to the United States and Canada. In some ships bound to New York, from 20 to 30 died on the passage; and in many vessels destined to Canada, the deaths were from 30 to upwards of 100. From one ship, the Virginia, bound from Liverpool to Quebec, with 470 passengers, 158 of the number were buried at sea.

The Montreal Immigrant Committee, in their report for 1847, state, that "in no year since the conquest has Canada presented such fearful scenes of destitution and suffering." "The year 1847 has been unparalleled for the amount of immigration to Canada, near 100,000 souls have left the British isles for these provinces the past year,—over 5,000 of these died on their passage out, 3,389 at Grosse Isle, 1,137 at Quebec, 3,862 at Montreal, 130 at Lachine, and 39 at St. Johns, making in all at these several places 13,815. How many have died in other sections in Canada East cannot now be known, nor, indeed, how many have perished in Canada West; but coupling all those who have perished with those who have passed into the United States, Canada cannot now number 50,000 souls of the 90 odd thousands which landed upon our shores." In sketching a retrospect of these terrific scenes, the Montreal committee forcibly remark—"From Grosse Isle, the great charnel house for victimized humanity, up to Port Sarnia—along the borders of our magnificent river, upon the shores of Lake Ontario and Erie, and wherever the tide of immigration has extended, are to be found the final resting places of the sons and daughters of Erin—one unbroken chain of graves, where repose fathers and mothers, sisters and brothers, in one commingled heap, without a tear bedewing the soil, or stone to mark the spot. Twenty thousand and upward have gone to their graves, and the whole appears, to one not immediately interested, 'like a tale that is told.'"

The disease of which the emigrant passengers, and in many instances, the officers and crews of ships, perished at sea, and of which a great number were ill on their arrival in the United States and Canada, was typhus in its genuine form. In some ships dysentery, small-pox, and measles swelled the amount of mortality, and added to the number of sick that reached the ports of destination. From some ships upwards of 100 ill were landed at the New York quarantine station; and so great was the influx

of sick and destitute emigrants, during the summer of the last year, that the public and private hospitals and almshouse were filled to overflowing, and sheds and tents were erected for their accommodation. In stating these things we cannot withhold the grateful remark that, in providing these accommodations, and furnishing other means of comfort, the same spirit of benevolence was manifested, which animated our countrymen in sending ships laden with supplies of food to the famishing in Ireland.

The number of persons admitted into the marine hospital at Staten Island, in the year 1847, was 6,932. Of this number, 5,277 were sick with fever, and 662 died. In that hospital, 2,229 cases were registered as typhus fever, of which 457 died, and 3,020 as remittent and typhus remittent fever, of which 205 died. There is reason to believe that many of these latter cases landed from emigrant ships, were typhus; but excluding these, the total number of deaths from typhus at the quarrantine hospital and within the city of New York, was scarcely less than 2,000.

But besides those admitted into the hospitals immediately after their arrival, or who sickened in the city and were sent to the hospitals, there were many who became victims of the disease at places, more or less distant in the countries over which they were dispersed.

The effect of introducing so great a multitude of persons affected with typhus, or imbued with the *fomes* of the disease, into the midst of the resident population, could not be otherwise than to excite alarm, and in fact, to extend the disease. Wherever the emigrant sick were congregated in masses, or collected in small numbers, or wherever individual cases were confined in small, unclean, and ill-ventilated apartments, the disease frequently attacked those who were in constant or occasional communication with them. From such communications nurses, physicans, friends, and transient visitors to the sick, have suffered in numerous instances. Of the medical officers in the New York and neighboring hospitals and almshouses not less, than eight, mostly in the vigor of early manhood, and while engaged in active duties, giving promise of future distinction in the ranks of the profession, have during the epidemic, been numbered with the dead.

But though the disease amongst residents has, in most instances, been traceable to exposure to the poison emana-

ting from the persons and effects of emigrants, there is reason to believe that it has, in some instances, originated *de novo* in the close and sordid dwellings of the poor in our large sea-port towns; and that the mortality from the diease has been augmented from such sources. This statement derives support from the circumstance, that the diseases prevalent in our nothern Atlantic cities for the last two or three years, and especially in New York, have manifested a decided adynamic diathesis, a circumstance indicating it is believed, the existence of a meteoratious influence, which not only develops a predisposition to typhus, but favors the production of the poison of the disease.

As to the mode in which the late typhus, or ship fever, has been propagated, the committee are not disposed to enter into an elaborate disquisition. The question whether typhus is diffused by a specific contagious principle, or by a vitiated human effluvium, may be regarded as theoretical, and therefore affords grounds for a diversity of opinion. The fact that patients affected with the disease, in certain conditions, are *foci* of the typhus poison, must be granted by all observers. But the admission of this fact does not necessarily impose the obligation to consider the poison a specific *virus*, analagous in its origin and distinctive properties to that of small-pox or measles, and that it is not so, is the view taken of it in this report. As here contemplated, it is the product of the chemical changes which take place in the excretions or *debris* of the body in health and disease, accumulated in close apartments,—a poison more frequently and readily generated by the exhalations and other excretive matters of typhus patients, than by those of persons suffering under other forms of the disease, or in the state of health,—a subtle aëriform principle, appropriately denominated *idio-miasma*, one of the generic forms of infection; and hence, typhus, instead of being classed among the *contagious* epidemics, is arranged among the infectious. In this theory is found a ready explanation of the origin and prevalence of typhus in jails, hospitals, ships, and the houses of the poor; and also, of the mode in which cleanliness and ventilation arrest and exterminate the disease. These hygienic means, so effective against the general propagation of the disease in the upper classes of society, seem clearly to intimate the true nature and source of the typhus poison.

So entirely were the symptoms and course of the ship fever, as it occurred in New York, correspondent with the descriptions given of typhus in the standard works on Practical Medicine, that nothing in detail need be said in respect to them. It is sufficient to observe, that among the emigrants the malady was marked by great prostration at an early period of its development, requiring liberal administrations of the most efficient means of stimulation and support. Petechiæ were more general than in some former years. Though some times running to a fatal issue under a simple form, the disease in its graver varieties, was generally attended with cerebral. thoracic, or abdominal complications. Erysipelas, often assuming a phlegmonous character, occurred in many cases, and frequently resulted in extensive sero-purulent deposits.—Fluid collections of this kind were most common in the parotid glands, eye-lids, and scalp. Secondary attacks happened in a few instances; and among the sequelæ was noticed an affection of the eyes of an amaurotic form.

As to the rate of mortality among the sick in the various hospitals of the United States and of Canada, there has been a great disparity; the differences depending on circumstances, in many cases, beyond the reach of control. In the New York hospital, as it is stated in the last annual report of the governors of that institution, "the number of typhus fever cases treated during the year, was 1,034; very many of them cases of the severest form of the disease, and demanding far more than the ordinary assistance of physicians and nurses. Of this number 136, or a little more than thirteen in the hundred, have died. This result, though it appears to be a large proportion, bears a very favorable comparison with the statistics of any other sanitary establishment under similar circumstances of disease, and affords a very striking contrast to the terrible mortality from the same cause among the recent emigrants from Europe in other parts of the continent." But though the amount of mortality has been influenced by the circumstances in which the sick in hospitals were placed, it is to be noticed that the proportion of deaths has been greater among those in the higher than among those in the lower ranks of life, a fact generally observed in the typhus epidemics of Europe.

With these remarks on the typhus or ship fever of the

last year, we might close our report, were it not that a question of more than ordinary interest, relating to this subject, demands from us a careful examination,—a question on which the profession in this country and in Europe are divided, and which, it is thought, the phenomena of the recent typhus epidemic, added to the facts afforded by former prevalences of the disease, have largely contributed to elucidate. It needs hardly to be stated that we refer to the question of the identity or non-identity of typhus, and a form of disease entitled typhoid fever. That there are two forms of fever, bearing these names, which closely resemble each other, and yet which are essentially distinct in their nature, is alleged by some of the most renowned pathologists of the age. The leading distinctive features of the two diseases are, it is affirmed, intumescence and generally ulceration of Peyer's glands, and certain other morbid conditions, in one of them, and the total absence of these phenomena in the other.

Now if, in fact, two such diseases exist in nature, the committee, in what they have submitted concerning epidemic typhus, have omitted to distinguish them, or, in other words, have committed an error in confounding distempers specifically dissimilar; for everywhere have the two forms of disease been associated and looked upon as one and the same malady. The attempt to rectify such an error, if such have been made, would involve the necessity of giving the history of two epidemics, occurring cotemporaneously in the same localities, one to bear the title of *typhus*, and the other of *typhoid fever*, and of sustaining the distinction between them,—a labor not achievable in the hands of your committee.

But it is believed that no such distinctive disorders can be recognized in nature; that the two forms of disease have not respectively a development which is peculiar or *sui generis;* that the disorders in question do not, as distinct specific affections, occur promiscuously, or side by side, in the same circumstances, from the same causes, among the same class of persons, in the same hospitals, ships, jails; and private dwellings of the poor. The grounds on which we venture to express these opinions we beg leave respectfully to state to the Association; and we do this with the more freedom, as the question of the identity or non-identity of typhus and typhoid fever should and

will continue to attract attention until a unanimity in regard to it is attained among the great body of enlightened physicians.

As the forms of disease in question are fevers, and as the problem to be solved is, whether they are, or are not, one and the same malady, it will not be improper to glance at the means by which fevers are distinguished. It is much to be deplored that the distempers comprised in the class *febres* have not been more perfectly disentangled and their specific relations to one another definitively settled. That this has not been done, is owing, not to any want of labor or talent devoted to the work, but to the difficulties and obscurities inherent in the subject.

The means of diagnosis in fevers are threefold; 1st, their efficient causes; 2dly their symptoms; and 3dly, the alterations produced in the organism discovered after death.

In regard to the efficient causes of fever, it is evident that a knowledge of them, for the purpose of diagnosis, is of the highest value; for were they in all cases ascertainable, they would furnish not only a ready and correct diagnosis, but a solid basis on which to rest a natural classification of fevers.

In respect to the symptoms, in the absence of a knowledge of the causes of fevers, it is clear that they are the only means by which, during life, one kind of fever can be distinguished from another. But in forming a diagnosis by these means, the mode of proceeding is in some respects peculiar. Whilst the acute phlegmasiæ and most other violent local diseases are generally cognizable, by their rational and physical phenomena, immediately, or at an early period after their development, it is frequently otherwise in the case of essential fevers. These diseases are not so commonly distinguishable at first sight. In order to collect the facts from which their differential diagnosis may be deduced, it is often necessary to observe them carefully, sometimes in more than single cases, during the space of several successive days. Moreover in the phlegmasiæ, the diagnostic phenomena are for the most part local, being confined to the organs immediately affected. In fevers it is not so; the diagnostic signs are spread throughout the economy, and are slowly and successively developed, and not until a certain number or variety of

them have come fully into view, can a specific fever be recognized.

Of the anatomical alterations produced by fevers, it may be said that such of them as occur in the internal organs, and which are discoverable only after death, have no absolute claim to the character of diagnostic phenomena, since none of them are invariably present in the same specific fever and many of them are found in different kinds of fever. There are, however, in some fevers, certain alterations in the organism so frequently revealed by autopsic examinations, that they may not improperly be admitted among the accessory means of diagnosis, especially in cases in which neither the causes nor the symptoms during life are sufficient to elucidate their distinctive nature.

From these general observations, we proceed to the question of the identity or non-identity of typhus and typhoid fever. And in doing so, leaving out of view for the present the history of their causes, we shall inquire:

1st. Whether these diseases differ so much in their symptomatology as to enable us to characterize them as distinct distempers?

2dly. Whether the morbid anatomy, and particularly the intestinal follicular lesions observed after death, indicate the diseases to be specifically different?

1. *Of the Symptomatology of Typhus and Typhoid Fever.*—In essential fevers there are a few symptoms which are common to them all; and to these symptoms are added, in particular fevers, certain phenomena which arise in the progress of the morbid movements that mark their special form and character. Now among the leading symptoms, mostly of the latter description, observable in typhus and typhoid fever, are the following: great prostration of the sensorial and muscular energies, cephalalgia, disagreeable dreams, somnolence, delirium, coma-vigil, deafness, aphonia, stupor, subsultus tendinum, picking of the bedclothes, and at imaginary objects in the air, small, frequent and feeble pulse, pungent heat of skin, petechial eruptions, sudamina, dry and brown or black fur on the tongue, accumulations of dark sordes on the teeth and gums, epigastic pain, tenderness of the abdomen, gurgling in the intestines, diarrhœa, meteorism, hemorrhage from the nose and bowels, and retention of urine.

Though such are the phenomena which occur in typhus and typhoid fever, yet all of them may not present themselves in every case; but it is observable that many of them, and especially those attendant on the last stage of fatal cases, are developed consecutively and in various degrees of force, in every individual example of both diseases.

Now it is among the phenomena enumerated, that we must seek for the diagnostic symptoms of the two diseases, if any such phenomena exist. If the diseases be specifically different, they should respectively present certain pathognomonic or characteristic symptoms. If they possess no such symptoms, nor any other diagnostic phenomena, they are obviously not distinct disorders. But let us examine the symptoms with a view to ascertain how far they indicate diseases different in their nature.

It is generally admitted that there is much variety in the symptoms of the premonitory and successive stages of typhus; and a similar variety, it is acknowledged, occurs in the corresponding stages of what is called typhoid fever. The incipient symptoms are often, for the most part, precisely the same in both maladies; and in whatever subsequent parallel stages we examine the two disorders, we find no signs by which to distinguish them as different species of fever. If in the several periods or stages of typhus we observe particular combinations of symptoms, we find the same combinations in the several periods of typhoid fever. Phenomena, which are usually qresent in typhus, are sometimes absent, or but slightly developed; and the same is true in typhoid fever. The constitutional phenomena in the latter disease are grouped, and transformed in the same manner as are those which occur in the former. So far then as the general symptomatology of these diseases enables us to form a judgment, they are essentially the same. This conclusion, it is believed, might be sustained by an appeal to numerous cases recorded as genuine examples of typhus and typhoid fever.

The phenomena on which the advocates for the distinctive nature of typhoid fever mainly rely in forming their diagnosis, are, it appears to us, totally insufficient to establish the specific character of the disease. The more important of these phenomena are lenticular rose-colored

spots on the trunk, chiefly on the anterior part of the abdomen and chest, sudamina, gurgling in the right iliac region, tenderness of the abdomen, diarrhœa, meteorism, enlargement of the spleen and epistaxis. But which of these phenomena does not occur in typhus? In regard to the size, color, situation, and the time of appearance of the eruption, there is nothing remarkable in the one disease which is not equally so in the other. The eruption in typhus, though among the characteristics of the disorder, is variable in size and color; sometimes it is of a rose hue, but frequently violet or purple, at one time persistent under pressure, and at another evanescent. Such were the varieties of the eruption in the cases of typhus, treated under the direction of one of your committee, in the New York Hospital in June, 1840, and at various times in subsequent years, cases of the identical nature of which there was not the slightest doubt, all of them having originated from the same source; namely, the fever poison *idio-miasma*, generated in crowded emigrant ships. In no respect did the eruption differ essentially from that which occurs in dothinenteritis or typhoid fever. As to sudamina, they are common to various states and kinds of disease.

It is well known that age, constitution and modes of life, climate, season, and especially epidemic influences exert a powerful agency in modifying the symptoms of diseases; and there is good reason to believe that to such causes, the varying forms and character of the eruptions in essential fevers are in a great degree attributable. In some seasons the eruption in typhus is absent in very many cases; and moreover, it is sometimes wanting in cases in which the Peyerian glands are extensively diseased. Dr. Elliott, one of the physicians of the Bellevue Hospital, reports an instance in which "Peyer's plate were much enlarged and deeply ulcerated," and in which "there was no eruption, nor any diarrhœa, during the whole progress of the case. Are not the rose-colored spots of typhoid fever the primary forms or conditions of the petechiæ or maculæ of typhus? Prof. Clark, one of the physicians of the hospital just named, says, that "in the proportion of about one-half of the typhus fever patients, a rose-colored eruption occurs on the body, which frequently in the progress of the fever assumes a petechial appearance." To elevate

the shades ofcolor, and the varieties of form of the eruption to the rank of diagnostic phenomena, indicative of distinct diseases, when the more striking and important phenomena are unequivocally expressive of an identity of disease, is a refinement which it appears to us, no clinical observer can regard with favor.

Nor are the diarrhœa and gurgling in the right iliac region worthy of consideration, as signs by which the affection called typhoid fever may be distinguished as a specific disease, or one different from typhus. These phenomena occur in cases in which the general symptoms of the two forms of disease, arising from disturbance of the nervous, vascular, and secretory functions, are the same and which therefore indicate the affections to be one and the same. Gurgling in the bowels is common to many diseases; and as to diarrhœa it frequently occurs in fevers in which there is no follicular disorder of the intestines; and though it is generally present in dothinenteritis, it is sometimes absent. Dr. Swett, late President of the N. Y. Medical and Surgical Society, so well known for his devotion to pathological studies, in discoursing on the cases of ship fever, treated at the New York Hospital, at a meeting of that society on May 1st, 1847, stated that "in the case in which the ulceration was most extensive, there had been no diarrhœa; in the other case with ulceration less in amount, though still considerable, the diarrhœa had been profuse." Similar remarks are applicable to the meteorism and tenderness of the bowels; they frequently occur in disorders different in their character, and are occasionally wanting in typhus and typhoid fever. With respect to epistaxis and delirium, they are totally destitute of any claim to the character of signs denoting a specific difference between the two forms of disease in question.

But though the rose-colored spots, the diarrhœa, and gurgling in the bowels, the meteorism, tenderness of the abdomen, epistaxis, and delirium, taken severally, or any two or three of these phenomena combined, do not enable us to distinguish typhus fever from the typhoid affection of Louis, still it may be asked, do they not, when collectively present, that is, when grouped together in the same case, indicate these diseases to be essentially different? In regard to this question, it is to be observed, that in discriminating fevers, the ablest clinical physicians place more

reliance upon the uniform constitutional phenomena, as manifested in the morbid conditions of the nervous, vascular, and secretory organs, than upon those phenomena which are local and contingent. The former are esteemed the efficient, and the latter the accessory means of diagnosis. Are not intermittent and remittent fevers known and distinguished by their types and general phenomena, and particularly by the modes in which the phenomena are combined or succeed each other? In these forms of fever there is often inflammation or engorgement of particular organs, and yet, notwithstanding such complications, each of these diseases is readily recognized and distinguished. Even in yellow fever, the course and form of the general symptoms, springing from derangement of the nervous and vascular systems, are vastly more important as indications of the specific nature and distinctive character of the disease, than the symptoms immediately connected with the gastro-intestinal lesions. These latter, it is true, are sometimes valuable subsidiary means of diagnosis; and, indeed are occasionally essential aids in deciding in doubtful cases; but aside from the general phenomena, they would scarcely suggest the idea of yellow fever; whereas, the constitutional symptoms are, of themselves, sufficient, especially when the disease is epidemic, to show the true character of the malady. The same remarks, in regard to the symptoms depending on special organic lesions, are applicable to every other essential fever. In the contagious exanthemata it is otherwise. In these, the eruption is, with very few or no exceptions, a constant occurrence, and is therefore regarded as one of their leading diagnostic phenomena.

Now if we examine the phenomena of typhus as described by English writers, and compare them with those of typhoid fever as described by M. Louis and others, are we not warranted in giving to the general symptoms a higher value as diagnostics of the special nature of these diseases, than to those which indicate an affection of the glands of Peyer? Is not typhus distinguished in all cases by the character and train of the general symptoms, rather than by any disturbance of the abdominal organs, indicated by tenderness under pressure, diarrhœa, gurgling in the right iliac region and meteorism? And is not the same true of typhoid fever? That such is the fact in respect to the

latter disease, there can be no question; for Louis and others have recorded cases as typhoid fever in which the symptoms of follicular disease of the bowels were obscure or not conspicuous.

Idiopathic fevers, then, are distinguised by the kind and character of their general symptoms, and by the mode in which these are grouped and successively developed. In comparing fevers with one another, the order of the occurrence, as well as the peculiarity of all the phenomena, should be observed. When this is carefully done, there is generally no difficulty in discriminating particular fevers. All cases of fever are to be considered of the same nature in which the constitutional symptoms occur in the same order, and agree in their general features. The local, contingent, and minor symptoms, as well as the variations in the mode of attack, violence and duration of the morbid phenomena, indicate modifications of the disease, and nothing more. A physician practically versed in the diagnosis of fevers, on visiting the wards of a hospital in which the various species of essential feversare assembled, will distinguish each particular kind of fever, not by tenderness of the abdomen, gurgling in the bowels, diarrhœa, and epistaxis—for these phenomena may or may not be present in fevers unlike each other—he will found his diagnosis on the type, and general course and peculiarity of the phenomena manifested in the nervous vascular, and secretory functions. In individual cases, in which the type and characteristic symptoms of a special form of fever are not as fully and clearly developed as is necessary to settle the diagnosis, he will await their occurrence, inquire into the etiology of the disease, and avail himself of the light thrown on the nature of the malady by the occasional or contingent symptoms. Thus, in yellow fever—a disease usually well marked and distinguishable by a train of general symptoms, cases occur in respect to which a doubt may exist as to their true nature, until the appearance of black vomit, an event in itself of no value as a diagnostic of a specific form of fever, except when it concurs with certain diagnostics presented by the general system.

Now in typhus and the typhoid fever of Louis, the morbid phenomena are so correspondent in the sensorial. vascular and other functions, and are so similarly catena-

ted or related to one another from their accession to their, termination, that the attempt to assort and group them, so as to make them express two different diseases, is a labor which it appears to us, must fail to show any distinction which is found in nature and cognizable by practical minds.

If such be a just view of the subject, in what light are we to regard the phenomena considered by Louis and others, as establishing a specific difference between the two forms of disease in question? To say nothing of the rose colored spots, delirium and epistaxis, are not the meteorism, tenderness of the abdomen, gurgling in the intestines and diarrhœa, occurring in fever, simply indicative of abdominal derangement, in the same manner as cough expectoration, and certain auscultatory signs denote a pulmonary complication, or as injection of the adnata, intolerance of light, headache and delirium, show encephalic disorder? The principal anatomical lesions in typhus are found in the three great cavities; and there are no reasons that would warrant the forming of a special disease of those cases in which abdominal symptoms are prominently developed, which would not equally justify the creation of new diseases of cases in which pneumonic and cerebral symptoms are predominant. If the term abdominal typhus, applied by the German physicians to dothinenteritis, be appropriate, it may not be improper to apply the terms *thoracic* and *cerebral* typhus to those varieties of the disease in which the lungs and brain are the organs that chiefly suffer organic changes. These terms, so used, import special complications of typhus, but not distinct diseases.

That every case described by Louis as typhoid fever was genuine typhus is, perhaps, doubtful; but that most of his cases in which he found, after death, follicular ulceration of the bowels were not that disease, he has, we think, failed to show by any diagnostic phenomena. Had no autopsies been made, the cases would have been considered, by every pathologist, as simple modifications of the typhus of England and other countries. In searching for novelties in pathological anatomy, it should be borne in mind that the evidence for and against the theory of the essential nature of fever vastly preponderates on the side of the former; and consequently, all anatomical le-

sions are to be considered contingent or secondary. The anatomical alterations in typhus and other kinds of fever sometimes vary so much in different cases, that were one called upon to decide on the nature of the disease in a particular case, by inspection of the body after death, it would frequently be difficult, and sometimes impossible to say of what species of fever the patient died. Now such an embarrassment, in forming a diagnosis, rarely occurs in cases in which the symptoms, during the normal course of the disease, are carefully observed. In the phlegmasiæ proper, a post-mortem diagnosis is in general, not left in doubt, but is promptly and certainly attained.

Upon the whole, it seems to us, that the ingenious attempts which have been made to establish a specific distinction between typhus and typhoid fever, by an analysis of the symptoms, have yielded no other profitable result than a lucid exhibition of the modifications which genuine typhus assumes under different circumstances of temperament, habits and mode of life, climate, &c. In no other light can we regard the able researches on the subject by Louis and numerous other pathologists in Europe and America.

2. *Of the Morbid anatomy of Typhus and Typhoid Fever.*—As, then, the vital phenomena, observed during the progress of the two forms of disease in question, lead to the conclusion that they are not specifically distinct in their nature, it seems that the opinion that they are so, has arisen from the discovery of dothinenteric lesions in one form of the malady and not in the other. The theory which localizes the cause of fever in the stomach and intestines, so fashionable in the last thirty years, is obviously the source to which may be traced the distinction which is made between typhus and typhoid fever. Stated in a brief form, the theory, in relation to these diseases, is explicitly this; a fever with ataxic or adynamic symptoms in which the glands of Peyer and Brunner are tumefied and ulcerated is typhoid fever; and that a fever attended with similar constitutional phenomena, and in which those glands are not diseased, is not typhoid, but some other species of fever. That Louis employs the fact of the non-existence of dothinenteric lesions in febrile cases, to prove that the disease is not typhoid fever is shown in his work on yellow fever, in giving the diagnosis of which

he specially distinguishes the two diseases anatomically, by the normal condition of the intestinal glands in one of them, and the constant alteration of them in the other.

That there is a great and fundamental error in the doctrine which makes a specific difference between the diseases to which our inquiries relate, may, we think, be shown by adverting to a few of the anatomical facts and general arguments which bear directly on the subject.

If a diseased state of the agminated isolated glands of the bowels constitute the peculiar and essential anatomical character of typhoid fever, then certain other maladies considered by every observer as different in their nature, should be regarded as identical with that disease, for there is abundant evidence to show that in many instances of the disorders referred to, those glands are inflamed, tumefied or ulcerated.

It must here be noticed that by the term anatomical character of a disease is meant, according to Louis, a morbid condition of organic lesion which invariably occurs in the same disease, and which, with certain other phenomena, distinguishes the disease from all others. Thus, in speaking of yellow fever, he says: "The red or black matter found in the stomach and intestines, not having been found in all the cases, it cannot be considered an anatomical character of that disease." But he adds, "it is not so with the alteration of the liver, which was more or less exactly the same in all the cases, and which for that reason ought to be considered as the essential anatomical character of the yellow fever of Gibraltar of 1828."

Now, if we use the term anatomical character in the rigorous sense in which it is employed by Louis, are we not bound to consider every fever in which Peyer's glands are diseased or ulcerated as typhoid fever? No special form of lesion of the intestinal glands, analagous to the special form of lesion of the skin in small-pox, is described as distinctive of the typhoid affection, for every morbid condition of them, except perhaps the tuberculous, is recognized in the disease.

The truth is, disease of the glands of Peyer and Brunner is, in none of its forms, in the strict sense of Louis, an anatomical character of any one species of fever. It occurs in disorders unlike in their causes and dissimilar in their character. It occurs occasionally in the different

kinds of *koino-miasmatic* fevers, and also, now and then, in the contagious exanthemata. It occurs especially and most frequently in *idio-miasmatic* or genuine typhus, and in febrile maladies which, in their progress, become adynamic, or, as it is usually and properly said, typhoid. It occurs more generally in typhus, in some years, and in some localities and countries than in others; and when it occurs it is an effect or complication, and not the cause of the febrile disturbance of the system.

If these statements be correct, and that they are so, might, we think, be established by abundant testimony, there are no solid reasons for considering the affection of Peyer's glands a feature distinguishing the typhoid fever of Louis from the typhus of England and other countries. We have already shown that these diseases are so similar in their symptoms, that they cannot by these means be rationally characterized as different species. Whatever variety of forms they exhibit in their general or local phenomena, they scarcely ever fail to manifest a unity of type and character; and consequently they should be regarded as the same disease. Indeed, as we have said before, were it not that post-mortem examinations had revealed a lesion of Peyer's glands, there never would have been a question as to their identity.

With all the light which modern pathological anatomy has shed on the nature and complications of fever, and with all the aid afforded by researches directed to the elucidation of the connections between the symptoms of fevers, and the structural alterations which occur in this class of diseases, can it be determined with a degree of certainty, approaching the exactness with which we are able to announce the existence of a pulmonary or cerebral complexion, that the glands of Peyer are diseased in a given case of fever? A high degree of probability that they are affected may be inferred from particular symptoms; but after all, nothing but an autopsy can establish the fact.

That dothinenteritis occurs in genuine typhus is proved by the concurrent testimony of many physicians, who have enjoyed the most extensive opportunities of studying the disease, in all its forms and varieties of complication, and whose learning and talent for observation entitle their opinions to implicit confidence. While on the one

and, it is shown by their inquiries that the intestinal glands are frequently affected in typhus, it is, on the other, demonstrated that in the form of fever denominated typhoid, the follicular disease of the bowels is sometimes wanting. To cite all the proofs which might be adduced in support of these remarks, would require wider limits than the present occasion affords. The statement of a few facts, bearing on the points in question, will sustain what a greater number could not render more evident. And first, let us advert to the evidence of some European authorities.

In no country is typhus more prevalent than in Ireland. The disease is there seen in all its varieties, symptomatic and anatomical; and it is to the enlightened physicians of that country that we are indebted for much valuable information in relation to the nature of the disease. Dr. Kennedy, in giving an account of the typhus which prevailed in Dublin in 1837–38, says: "The only post-mortem appearance that was at all constant, was congestion of the vessels of the membranes of the brain." "But if this epidemic typhus was not characterized by any uniform or constant pathological changes, it was very remarkable for the almost total absence of those abdominal lesions which have been regarded by some as the invariable attendants of typhus fever. Indeed, in this respect, this epidemic affords a striking and conclusive refutation of the false and hasty generalizations of the French pathologists on this subject. In this respect, also, it differs altogether from the epidemic fever of 1826, (which the writer had an ample opportunity of investigating while in charge of fever patients, supported at the expense of the government, at the Meath hospital that year,) in which in a large proportion of the post-mortem examinations made by him, more or less disease of the glands of Peyer was found." The typhus epidemics here brought into contrast by Dr. Kennedy, happily illustrate a well-known law of epidemics, namely, that the same popular disease varies in its form and anatomical lesions in different years and seasons. There can be no question that the two epidemics of which he speaks were essentially the same in their nature, and the difference in the condition of the intestinal canal in the two epidemics was incidental, certain influences in 1826 operating to produce "in a large propor-

tion" of the cases, "more or less disease of the glands of Peyer," whereas, in 1837–38, the analogous modifying influences occasioned scarcely any organic changes in the bowels, but chiefly a different complication, "a congestion of the vessels of the membranes of the brain."

Dr. M'Cormac, of Belfast, who evinces in his work on fever great familiarity with the diseases of Ireland, after minutely describing the various changes which take place in the aggregated and solitary follicles of the intestines, remarks: "This exanthem, if we may call it so, does not present the regular phases seen in small-pox; it may exist during the greater portion of the disease, and even after the fever has terminated." And he adds. "after what I have said, I need hardly repeat again, that together with its results, it is on by an occasional contingency in fever, and seemingly more frequent on the continent than in this country—from what cause, however, if it be this, I do not pretend to say."

Dr. Stokes, of Dublin, than whom there are few physicians more capable of arriving at correct conclusions on pathological subjects, regards "typhus as an essential fever which affects in an especial manner in different cases, and during different epidemics, either the head, the chest, or the abdomen." He alleges that "the ulcerations of the intestines so much insisted upon by the French pathologists, are neither of constant occurrence, nor are they characteristic of the disease; in one epidemic they are found on dissection, much more frequently than in another." Dr. Graves, the able colleague of Dr. Stokes at the Meath Hospital, entertains the same view of the nature of typhus.

In accordance with these opinions, are the extensive observations made in England, recorded in the writings of Drs Hewet, Tweedie, Copland, Southward, Smith, Marshall Hall and others. All these concur that the glands of Peyer are frequently the seat of anatomical changes in typhus.

Similar investigations in Scotland have established the same facts in regard to the pathological anatomy of the disease in that country. Dr. Davidson, in his Thackeray Prize Essay on typhus fever, gives a table showing the number and kinds of lesions observed in the post-mortem examinations of sixty-three eruptive cases admitted into

he specially distinguishes the two diseases anatomically, by the normal condition of the intestinal glands in one of them, and the constant alteration of them in the other.

That there is a great and fundamental error in the doctrine which makes a specific difference between the diseases to which our inquiries relate, may, we think, be shown by adverting to a few of the anatomical facts and general arguments which bear directly on the subject.

If a diseased state of the agminated isolated glands of the bowels constitute the peculiar and essential anatomical character of typhoid fever, then certain other maladies considered by every observer as different in their nature, should be regarded as identical with that disease, for there is abundant evidence to show that in many instances of the disorders referred to, those glands are inflamed, tumefied or ulcerated.

It must here be noticed that by the term anatomical character of a disease is meant, according to Louis, a morbid condition of organic lesion which invariably occurs in the same disease, and which, with certain other phenomena, distinguishes the disease from all others. Thus, in speaking of yellow fever, he says: "The red or black matter found in the stomach and intestines, not having been found in all the cases, it cannot be considered an anatomical character of that disease." But he adds, "it is not so with the alteration of the liver, which was more or less exactly the same in all the cases, and which for that reason ought to be considered as the essential anatomical character of the yellow fever of Gibraltar of 1828."

Now, if we use the term anatomical character in the rigorous sense in which it is employed by Louis, are we not bound to consider every fever in which Peyer's glands are diseased or ulcerated as typhoid fever? No special form of lesion of the intestinal glands, analagous to the special form of lesion of the skin in small-pox, is described as distinctive of the typhoid affection, for every morbid condition of them, except perhaps the tuberculous, is recognized in the disease.

The truth is, disease of the glands of Peyer and Brunner is, in none of its forms, in the strict sense of Louis, an anatomical character of any one species of fever. It occurs in disorders unlike in their causes and dissimilar in their character. It occurs occasionally in the different

kinds of *koino-miasmatic* fevers, and also, now and then, in the contagious exanthemata. It occurs especially and most frequently in *idio-miasmatic* or genuine typhus, and in febrile maladies which, in their progress, become adynamic, or, as it is usually and properly said, typhoid. It occurs more generally in typhus, in some years, and in some localities and countries than in others; and when it occurs it is an effect or complication, and not the cause of the febrile disturbance of the system.

If these statements be correct, and that they are so, might, we think, be established by abundant testimony, there are no solid reasons for considering the affection of Peyer's glands a feature distinguishing the typhoid fever of Louis from the typhus of England and other countries. We have already shown that these diseases are so similar in their symptoms, that they cannot by these means be rationally characterized as different species. Whatever variety of forms they exhibit in their general or local phenomena, they scarcely ever fail to manifest a unity of type and character; and consequently they should be regarded as the same disease. Indeed, as we have said before, were it not that post-mortem examinations had revealed a lesion of Peyer's glands, there never would have been a question as to their identity.

With all the light which modern pathological anatomy has shed on the nature and complications of fever, and with all the aid afforded by researches directed to the elucidation of the connections between the symptoms of fevers, and the structural alterations which occur in this class of diseases, can it be determined with a degree of certainty, approaching the exactness with which we are able to announce the existence of a pulmonary or cerebral complexion, that the glands of Peyer are diseased in a given case of fever? A high degree of probability that they are affected may be inferred from particular symptoms; but after all, nothing but an autopsy can establish the fact.

That dothinenteritis occurs in genuine typhus is proved by the concurrent testimony of many physicians, who have enjoyed the most extensive opportunities of studying the disease, in all its forms and varieties of complication, and whose learning and talent for observation entitle their opinions to implicit confidence. While on the one

hand, it is shown by their inquiries that the intestinal glands are frequently affected in typhus, it is, on the other, demonstrated that in the form of fever denominated typhoid, the follicular disease of the bowels is sometimes wanting. To cite all the proofs which might be adduced in support of these remarks, would require wider limits than the present occasion affords. The statement of a few facts, bearing on the points in question, will sustain what a greater number could not render more evident. And first, let us advert to the evidence of some European authorities.

In no country is typhus more prevalent than in Ireland. The disease is there seen in all its varieties, symptomatic and anatomical; and it is to the enlightened physicians of that country that we are indebted for much valuable information in relation to the nature of the disease. Dr. Kennedy, in giving an account of the typhus which prevailed in Dublin in 1837–38, says: "The only post-mortem appearance that was at all constant, was congestion of the vessels of the membranes of the brain." "But if this epidemic typhus was not characterized by any uniform or constant pathological changes, it was very remarkable for the almost total absence of those abdominal lesions which have been regarded by some as the invariable attendants of typhus fever. Indeed, in this respect, this epidemic affords a striking and conclusive refutation of the false and hasty generalizations of the French pathologists on this subject. In this respect, also, it differs altogether from the epidemic fever of 1826, (which the writer had an ample opportunity of investigating while in charge of fever patients, supported at the expense of the government, at the Meath hospital that year,) in which in a large proportion of the post-mortem examinations made by him, more or less disease of the glands of Peyer was found." The typhus epidemics here brought into contrast by Dr. Kennedy, happily illustrate a well-known law of epidemics, namely, that the same popular disease varies in its form and anatomical lesions in different years and seasons. There can be no question that the two epidemics of which he speaks were essentially the same in their nature, and the difference in the condition of the intestinal canal in the two epidemics was incidental, certain influences in 1826 operating to produce "in a large propor-

tion" of the cases, "more or less disease of the glands of Peyer," whereas, in 1837–38, the analogous modifying influences occasioned scarcely any organic changes in the bowels, but chiefly a different complication, "a congestion of the vessels of the membranes of the brain."

Dr. M'Cormac, of Belfast, who evinces in his work on fever great familiarity with the diseases of Ireland, after minutely describing the various changes which take place in the aggregated and solitary follicles of the intestines, remarks: "This exanthem, if we may call it so, does not present the regular phases seen in small-pox; it may exist during the greater portion of the disease, and even after the fever has terminated." And he adds. "after what I have said, I need hardly repeat again, that together with its results, it is on by an occasional contingency in fever, and seemingly more frequent on the continent than in this country—from what cause, however, if it be this, I do not pretend to say."

Dr. Stokes, of Dublin, than whom there are few physicians more capable of arriving at correct conclusions on pathological subjects, regards "typhus as an essential fever which affects in an especial manner in different cases, and during different epidemics, either the head, the chest, or the abdomen." He alleges that "the ulcerations of the intestines so much insisted upon by the French pathologists, are neither of constant occurrence, nor are they characteristic of the disease; in one epidemic they are found on dissection, much more frequently than in another." Dr. Graves, the able colleague of Dr. Stokes at the Meath Hospital, entertains the same view of the nature of typhus.

In accordance with these opinions, are the extensive observations made in England, recorded in the writings of Drs Hewet, Tweedie, Copland, Southward, Smith, Marshall Hall and others. All these concur that the glands of Peyer are frequently the seat of anatomical changes in typhus.

Similar investigations in Scotland have established the same facts in regard to the pathological anatomy of the disease in that country. Dr. Davidson, in his Thackeray Prize Essay on typhus fever, gives a table showing the number and kinds of lesions observed in the post-mortem examinations of sixty-three eruptive cases admitted into

the Glasgow Fever Hospital, from May 1st to November 1st, 1839, from which it appears that enlargement of Peyer's glands and ulceration of the intestines were present in many cases.

These are but a few of the evidences of the occurrence of dothinenteric lesions in the typhus of Great Britain and Ireland. But it may be said that the pathologists of these countries confound diseases which are specifically different; and that this is owing to their mode of studying the phenomena not being so minute and philosophical as the method pursued by the physicians of France. If the French make distinctions where the English do not, are we to accord to the former superior powers of discrimination? The English, Scotch, and Irish physicians have given evidence of talent and industry in the investigation of febrile pathology not surpassed, we think, by the medical men of any country. They have patiently examined the grounds upon which their continental brethren have drawn a line of distinction between typhus and typhoid fever; and having done so, they deny that there is any foundation in nature for it. Dr. Davidson, who, it is believed, expresses the general opinion of British physicians, says: "Would it not therefore, be refining our classification beyond all precedent, to separate typhus and typhoid fever with two species, where it has been shown that the symptoms in both are the same, or very nearly so, that they have nearly the same laws, as far as these have been ascertained that the severity of the symptoms in both is not in proportion to the lesions of the intestinal follicles; and that the other complicications of both are similar, although various in the same place at different periods, while the only characteristic in dispute has been acknowledged not a constant, and therefore, not a necessary element for the existence of the disease."

Such, then, being the opinions of physicians practising in the British Islands, it becomes a question of curious interest, if nothing more, to learn what impressions have been produced on the minds of those who, conversant with the typhoid fever of Paris and other continental cities, have personally compared this disease with the British typhus. Dr. Lombard, of Geneva, so often quoted on this subject, during his visit to England, Scotland, and Ireland in 1836, examined several cases of typhus, two in Dublin, and one

in Glasgow, and finding the symptoms similar to those of the typhoid fever of the continent, with which he was familiar, expected to find after death the usual dothinenteric lesions; but on examination, to his great astonishment, no such lesions were found. He says, "in the whole course of my experience I have met with nothing which has surprised me more than this occurrence; I had been for years engaged in the study of typhus fever, and for years my almost daily experience in the dead-room led me to associate certain lesions of the alimentary canal with the symptoms of this disease, when suddenly I find myfelf assailed by a new experience exactly contradictory of my former; nor was my new experience unconfirmed by that of the Glasgow or Dublin physicians." With such facts before him, to the question, "whether the two diseases are different or the same?" he answers: "I cannot allow that they are specifically distinct, and consequently I am almost forced to give up the opinion that the local changes of structure are of paramount importance in causing or producing the symptoms that accompany this type of fever." Though Dr. Lombard subsequently resumed the opinion that the two diseases are different, it appears to us he did so without sufficient reasons.

In the following year, 1837, Dr. Staberóh, of Berlin, made a visit to Great Britian and Ireland, and for six months devoted himself to the study of the fevers of those countries. His intimate acquaintance with the typhoid fever of Paris especially qualified him to compare the diseases in question; and, after doing so, he concluded, that though in many cases the British typhus wanted the follicular lesion of the bowels, the disease was the same as the typhoid affection of the continent.

To the above authorities in favor of the identity of the two forms of disease, we must not omit to add that of M. de Claubry, whose able and elaborate investigations of the subject were published in Paris in 1844. His assemblage of facts, and the inferences he draws from them, seem scarcely to admit of being rationally controverted.

It thus appears that there are many of the more eminent pathologists of Great Britain, Ireland, and other European countries who concur in the opinion that no essential difference exists between typhus and typhoid fever. Their observations, however, establish the fact, that dothinenteritis frequently modifies the character of typhus.

and that this complication is more common in some seasons and some countries that in others—a circumstance referable to causes which, though obscure, are clearly adventitious.

The necroscopic researches in this country have afforded no satisfactory evidence of there being a specific difference between the forms of malady under consideration. On the contrary, the facts already spread before the public, as well as those daily accumulating in our hospital registers, when carefully analyzed and compared with the phenomena of the typhus and typhoid epidemics of other countries, show that these diseases are one and the same. Cases presenting the same general features, the same nervous, vascular, eruptive, and other phenomena, and springing from the same efficient cause, are found to differ merely in their complications, one case exhibiting after death various anatomical changes, particularly alterations of the glands of Peyer and Brunner, and others showing no such alterations.

The strongest testimony, as it appears to us, yet adduced on this side of the Atlantic in favor of the opinion of the non-identity of typhus and typhoid fever, is that furnished by Dr. Gerhard of philadelphia. This gentleman has described, in the American Journal of the Medical Sciences for 1837, two epidemics, occurring in that city in different years, one of which he designated typhus and the other typhoid fever. In speaking of the former (typhus), he says, "in this large number of autopsies, amounting to about fifty, there was but in one case, and that doubtful in its diagnosis, the slightest deviation from the natural appearance of the glands of Peyer." In the epidemic which he denominated typhoid fever, it appears that Peyer's glands were generally affected, and hence he inferred that, notwithstanding the similarity of the general symptoms to those of typhus, the malady was not typhus. Now, if what has been said of the variety of complications which the same epidemic disease assumes in different years, be true, is it not fair to conclude that the differences in the morbid anatomy of the two epidemics described by Dr. Gerhard, were due to incidental causes; and that the two epidemics were the same disease modified in different seasons, as in the instances mentioned by Dr. Kennedy and adverted to by Drs. Stokes and Davidson?

The post-mortem examinations made at the New York Hospital, during the last year, might be deemed sufficient, apart from all other testimony, to establish the identity of typhus and typhoid fever. In the cases of ship fever, a pure form of typhus, a disease unquestionably originating in every instance from the same poison, follicular disease of the intestines was found after death in some cases, and not in others. Dr. Stone tells us, in the New York Annalist, that, in four weeks ending May 12th, 1847, there were admitted into the Bellevue Hospital about four hundred and sixty-six cases, sick of typhus; and he says that "the most constant anatomical lesion which I have found in the examination of about twenty-five of those who have died, is an enlargement and softening of the spleen. Peyer's glands were found more or less diseased in about one-fourth of these cases, and the heart more or less softened in a somewhat larger proportion." The same gentleman, in another communication, published in the New York Journal of Medicine, relating to the same fever, gives the following among his other conclusions, drawn from observations of the disease in New York and New England: "That typhus and typhoid fever, so called, are identical." Professor Clark, in illustrating the morbid anatomy of typhus, at a meeting of the New York Pathological Society, Feb. 23, 1848, stated, in reference to a particular hospital case, that "the usual old typhoid lesion affected the intestines with the common appearance of the present epidemic." "This case," he said, "allies the present epidemic with the typhoid fever." At a meeting of the same society held March 8, 1848, Dr. Swett made the following interesting statement. He said, "that fever had occurred at the Bloomingdale Lunatic Asylum, carried thither by an insane emigrant and fifteen persons had been attacked with it. Nine or ten had come to the hospital, and two had been examined post-mortem. In the first there were no lesions of any kind; in the second there were ulcerations of the small intestines." "Where the ulcers existed, instead of attacking Peyer's glands in the middle, they attacked the edges, extending two or three feet up the intestines, and then disappearing. Some had cicatrized, and some were cicatrizing. Both cases originated from ship fever in a very cleanly and healthy set of men; so that it seems as if the same poison might communicate to one ulceration, and to the other none."

Dr. Swett ingenuously added, "that his belief in the non-identity of the diseases lessened daily, and he could not discriminate between cases presenting intestinal lesions (typhoid), and those which did not (typhus)." Dr. Griscom, one of the physicians of the New York Hospital, states, that of ten autopsies of patients dying of ship fever in that institution, in July, August, and September, 1847, six presented follicular disease of the intestines. Peyer's plates were prominent in four, and ulcerated in two. Facts of this kind are so frequently observed in the New York Hospitals that they have, in a measure, ceased to attract the attention of many physicians once deeply interested in their investigation, in reference to the question of the identity of typhus and typhoid fever.

To the same conclusion tend the inquiries, relating to this subject, in other quarters of our country. A writer in the American Journal of the Medical Sciences, in speaking, it is presumed, of the ship fever in Philadelphia, says: "We have lately seen a great number of cases of fever in recently arrived Irish emigrants—the majority of the cases were well marked typhus fever; a few were of equally well marked typhoid fever; while in a third class of cases, the characteristics of these two fevers were so completely blended that it was very difficult to determine which of the two predominated." And he adds, "here then we have persons who have been exposed to precisely the same morbific causes, attacked with fever of a similar type, bearing the characters in some of the typhoid fever, in others of the typhus, and in others again a union, as it were, of the characteristics of both. This fact would seem to prove that the typhoid is a mere form or variety of the typhus fever." He also remarks, that "in the present state of our knowledge on this subject, it is, we conceive, much safer to consider the typhoid as one of the forms of typhus fever."

In view of the facts which have been stated, it seems to the committee that no reasonable doubt can remain that typhus and typhoid fever are identical. Were medical men united in this conclusion, might we not hope, that with undivided attention, and a union of effort more rapid advances would be made in determining the causes of the morbid condition of the Peyerian glands and other organs which occur in some cases of typhus and not in others? On

this subject, we would, in conclusion, remark, that it appears to us, that the deposit of typhus matter, so called, occurs not only in the intestinal follicles and mesenteric glands, but also in and beneath the mucous membranes, in the lungs, spleen, and probably in the kidneys; that in some cases this form of epigenesis shows itself mostly, if not exclusively, in the intestines, in others in a different part, and in others again in various tissues; that in some instances it is not discoverable in any organ; that in the typhus of some seasons and countries it is generally present in the intestines, and in others, absent in many or a large majority of cases.—*Trans. of Am. Med. Association, Vol. I.*

A New Febrifuge.—The Journal de Pharmacie and de Chimie contains an article of M. Duchassaing on the bark of the baobab, or Adansonia digitata, which he pronounces to be a succedaneum of Peruvian bark. Golbery and Frank mention that the Indians of Senegal make an agreeable beverage with the pulp which surrounds the seeds of the fruit, and that this drink is employed by them in the fevers of the country. Adanson, a French botanist, who first introduced the plant, states, in an account to the Academy in 1761, that he kept himself free from the epidemic fevers of Senegal by using a decoction of the dried leaves of the plant. Dr. Duchassaing now announces that a decoction of the bark of the baobab (which grows plentifully in Senegal, and along the whole of northern Africa as far as Abyssinia) is all-powerful in ague. He takes two pounds and five drachms of water to one ounce of the bark; the decoction is very apt to spoil, but this defect is remedied by a few drops of sulphuric acid or alcohol. The author has used the bark extensively, and found it very efficacious even in those cases where quinine had failed once. Planters of Guadaloupe, to whom Dr. Dachassaing communicated the virtues of this plant, use it now exclusively for their negroes, and have never recourse to quinine (which is very expensive in that colony) except in peculiar cases. It is to be doubted whether the baobab will ever supersede quinine; but if further experiments with it are successful, it might be employed where quinine

is found too dear, and as possessing, for many cases, a sufficient amount of activity; in fact, it may become, if not an *alter ego*, at least a succedaneum to quinine.—*London Lancet.*

Accidental poisoning with bad Calomel in France.—Calomel is much used in this country, and we are happy to find that the absence of accidents caused by this salt evidently point to the care with which the bi-chloride is separated from it. A gentlemen has just fallen a victim in France to the faulty preparation of calomel. His physician ordered twelve grains of the salt (prepared by steam) to be suspended in a gummy emulsion. One spoonful was to be taken every hour. The first spoonful produced an alvine evacuation, the second, dijections of large quantities of mucus, then followed a frightful convulsive fit; a third spoonful confirmed the convulsions, and the next day, at 12 o'clock the patient was dead. The whole mixture was immediately analyzed; it contained no less than from three to four grains of bi-chloride of mercury. Fifteen grains of the calomel taken from the establishment of the chemist where the mixture had been prepared gave the same relative results. A very simple way of testing calomel, among the many which are in use, is to place a little on a well scoured sheet of copper, and then treat it with ether. On rubbing the metal slightly on the point where the evaporation is taking place, a brilliant amalgram is formed. This is enough to show that the calomel contains a soluble salt of mercury, that it is poisonous, and ought to be rejected. *Ibid.*

Medical Profession in Paris.—It is stated in one of the Journals that Dr. Chomel, who has so extensive a practice, was an entire day, lately, without a single patient to visit; and that M. Marjolin, who ordinarily coins money during his hours of consultation, has not received, on an average, four dollars a day during the last month. This may furnish some idea of the state of distress of practitioners of less note.—*Medical News.*

THE WESTERN JOURNAL.

THIRD SERIES.—VOL. III.—NO. I.

LOUISVILLE, JANUARY 1, 1848.

MEDICAL SCHOOLS.

No candid and impartial observer, we believe, will deny that there is a tendency in our country to an excessive multiplication of medical schools. Rapid as is the increase of our population, the rate of increase in these institutions is greater. For a long time, the only schools of medicine in America were at Philadelphia and New York. The first medical degrees conferred were in 1770, by the latter school, and the graduating classes of both schools, for two years, numbered only thirteen. In 1804 Dr. John B. Davidge commenced a course of lectures in Baltimore to a class of six students, and three years subsequently a charter was granted by the State for the University of Maryland. The medical department of Yale College, and the Boston medical school were organized in 1810. In 1818, medical schools were commenced at Lexington and Cincinnati, and in 1824 the medical college of South Carolina was established.

Thus we see, that it is only thirty years since the origin of these institutions in the valley of the Mississippi, and for a number of years there were but two in all this great region. The number at present exceeds a dozen, and new schools are springing up almost every year, while the increase has gone on, with nearly the same rapidity, beyond the mountains. Among unquestionable advantages that have resulted from the

multiplication of these schools, there are very great evils which the profession is beginning sorely to feel. If medical education has been brought to the door of many who had not the means to go abroad in pursuit of it, the competition among institutions struggling into or for existence, the contest for students, the puffing, and the underbidding, are fast tending to deprive professional honors of all their dignity and value. Let any reader look at the following paragraphs from the Prospectus of the *Rock Island Medical School* lately started, and then say whether this remark is not just. We copy from the *Western Lancet*.

"That the selection of instructors has been judicious and that every member of the faculty will sustain himself before the classes may not be questioned.' " 'They have reasons (not revealed) for beleiving that a larger number of students may assemble at Rock Island than has ever composed the first class of any medical school in the Union, and that the resulting graduating class may be larger."

"No fancy sketch which the imagination can draw can compare with the beauty of the site; and its eligibility, when the Mississippi shall be bridged, can only be rivalled by its beauty. The bridging of the river at this point is so familiarly spoken of by the inhabitants as an improvement and work of art certain to take place before the elapse of many years, that the prediction may not be looked upon as an idle day-dream, that a flourishing Medical School and Hospital *may*, ere long, occupy the very same grounds on which General Taylor was ordered a few years ago to seize and erect a fort in the then wilderness and hostile Indian country. It *may not* come to pass during the presidency of General Taylor, whose policy as far as regards internal improvements, is not very lucidly revealed; neither during the presidency of General Cass, whose letter on river and harbor improvements was certainly laconic; nor yet indeed under the second term of service of the 'northern man with southern principles,' ex-president Van Buren, whose whereabouts on these small questions of river, lake or island improvements is not as well understood of late, as are his views on the great 'Wilmot Proviso question.' But nevertheless at no very remote period, under the administration of some wise president, these things *may* all come to pass on Rock Island. and medicine flourish in this panorama, par excellence, of beauty and promise, where but a few years ago, a lone military post, in the heart of the Indian country, was the solitary herald of civilization."

"The professor of the Theory and Practice has 'views on malarious fevers peculiarly his own, and which differ essentially from the doctrines of the books, and their correctness is proved from the uniform success of his practice, and that of the numerous pupils who have read medicine with him.' Happy pupils! O most excellent master! 'No student ever

forgets the doctrines and precepts he receives from this master.' *Quantum sufficit.*

"The professor of Materia Medica has 'a thorough acquaintance with his subject' and moreover 'his happy arrangement disarms materia medica of much of the dryness and confusion incident to the old method of teaching still pursued in most of the schools."

In conclusion, the professors propose to receive "*obligations*" from such students as have no money.

But bad as this is, it is not the worst aspect of the case. A sorer evil is adverted to by Prof. Eve, in his introductory lecture, as having grown out of the scramble for students. He says—

"In Philadelphia there are five medical colleges, which causes a competition and contention for pupils derogatory to the profession. In vain do othe: colleges reject unqualified candidates, when they have only to go to Philadelphia, to be certain of a diploma in a few months, however limited their qualifications. These facts are too notorious to require scruple or delicacy in adverting to them.

"While in Philadelphia, we were informed, that a student who had been rejected by the University obtained a diploma, a fortnight after in that city. In no other city does the same corruption, do the same enormous abuses exist. It is certainly more incumbent on the physicians of Philadelphia than all others to be active and energetic in the work of reformation."

A similar statement was made to us by gentlemen in Baltimore and Philadelphia last spring, and the character of the authors leaves no room to doubt its truth. Here then, at the emporium of medical science in America, in the city of Rush, Wistar, and Physick, is an institution, chartered by the commonwealth, in which the rejected candidates of other medical schools, after a few week's study, are invested with all the honors of the doctorate. The fact ought to be proclaimed abroad, that physicians when they send their sons and pupils to Philadelphia may know what cautions to give them. By a letter just received from a physician of Mississippi who is passing the winter in Philadelphia, we are glad to see that students are fully apprised of the standing of this institution. "They look upon it," he says, "with perfect contempt. Two of the professors left it after delivering their introductories, and —— lectures on three different branches himself. He cannot get respectable physicians of the city to join him." Dr. Burden, and Dr. Thomas D. Mitchell

resigned their chairs in this school at the close of the last summer session.

From the same gentleman, we learn that the Franklin Medical College has closed doors, and that the building has been sold to the Catholics for a hospital.

And so it becomes apparent, that there are limits to the capacity even of Philadelphia to support medical schools. With its teeming population and its great renown, it has not been able adequately to sustain half the number started. Its oldest schools are prosperous, and, there is every reason to believe, will continue to prosper; but the business, to use a merchant's phrase, has been overdone, and failure, and loss, as might have been foreseen, is the issue.

It were well if other cities would profit by the experience of Philadelphia. At the last session of the Legislature of Kentucky, application was made for the privilege of establishing a second medical school in Louisville. Wisely, as we think, the application was refused, and so the evil to the city and the profession was at least postponed. If Philadelphia and New York have proved unequal to the task of maintaining more than two schools; if Kentucky has shown that she cannot support two; what can exceed the folly of attempting to build up a second one in Louisville, with less than a sixth of the population of the last of those cities.

EXTENSION OF THE LECTURE-TERM.

Prof. Joseph A. Eve states in his Introductory Lecture, that the Medical College of Georgia at its organization, adopted six months as the length of their lecture-term, but that after persevering five years "with little encouragement and patronage," the professors finally came down to the short sessions of other schools. "After the adoption of the four month's term," he remarks, "their classes increased rapidly."

We take great pleasure in quoting this piece of medical history, not only as an act of justice to a highly respectable institution, but as illustrative of that progress in the profession signs of which are visible all around us. A number of schools have adopted a lengthened term, and they experience no diminution in the size of their classes. A few years have wrought a signal change in professional opinion, and the schools are conforming to that enlightened judgment. In all the schools the

sessions, in a few years, will be extended; and dissections and clinical instruction will be insisted upon, as pre-requisites to graduation. It gratifies us to learn that the Medical College of Georgia is prosperous. With a gifted faculty, alive to the true glory of their profession, ready to second every movement tending to its advancement, high-toned and manly, it deserves to prosper.

SECTIONAL MEDICINE.

We have never been of the number who contend, that a physician ought to be educated in the region of country where he is to practice his profession, and what has been urged of late years in support of the doctrine has only served to confirm our convictions of its unsoundness. The faculty of Hampden-Sydney College have been amongst its most strenuous advocates. Recently, Dr. Cullen, the professor of Theory and Practice, found it necessary to relinquish the duties of his chair on account of indisposition, and Dr. Clymer, of Philadelphia, has been invited to take his place for the present session. The appointment is a most judicious one; but what becomes of the theory, that students to treat southern diseases must study in a southern school, when their instructor in the practice of medicine is a northern man?

CHLOROFORM IN TRAUMATIC TETANUS.

A student of medicine at Columbia, Tenn., writing to a friend in this city, says: "A young physician in this town, about a year since, gave chloroform to a person previously to extracting a tooth, and, for some reason, very alarming symptoms followed. Since that time it was not used here until the day before yesterday, when on consultation, finding it highly recommended in Prof. Yandell's introductory lecture, it was determined to give it in a case of traumatic tetanus. Large doses of opium, and other antispasmodics had been previously tried without effect. The experiment was witnessed by most of the physicians in Columbia, and painful apprehensions were felt for the result. Under the influence of the anæsthetic the patient fell into an easy and refreshing slumber, a pleasant smile resting upon his countenance which before was haggard. His muscles relaxed; his mouth was easily opened; his pulse improved;

the spasms ceased. When he awoke the tetanic symptoms returned, but not with the same violence. It was administered a second time after an interval of several hours, but did not entirely overcome the muscular contractions It was not afterwards repeated, and the patient eventually died."

FEVERS IN ALABAMA.

In a letter dated Nov. 5th, 1848, Dr. T. C. Osborne, speaking of the prevalence of disease in Alabama during the past season, mentions that on "one plantation in the neighborhood of Erie two hundred and seventy-five cases of fever had occurred, of which two were cases of typhus, twenty-five of typhoid, and the remaining two hundred and forty-eight cases of remittent and intermittent fever. Only five of the whole proved fatal. One sank under copious hemorrhage from the bowels; one died without any apparent lesion; and two died in convulsions. The boy who was carried off by hemorrhage, had been for sometime convalescent from typhoid fever. The girl, in whose case no special lesion was apparent, presented in her disease all the symptoms of typhus."

PROGRESS OF CHOLERA.

In Berlin cholera is said to have spread less this time than it did in other epidemics, but the mortality from it has been as great. From the 27th of July to the 11th of October, the number of cases was 2,009, and of these 1262, or more than one half, were fatal.

The epidemic has broken out at Amsterdam. Seven cases had been reported at the general hospital; and four persons had died.

At Hamburgh, the official reports state that up to the 9th of October the number of persons attacked was 2,229, of whom 1,043 had fallen victims. The disease was spreading at Lubeck.

In Turkey the epidemic was gaining ground when the last accounts were received at London. It raged with great violence at Smyrna, where the mortality daily exceeded a hundred. Greece had escaped up to the last dates. In Syria and Palestine the disease was raging with great violence. At Damascus, the deaths are reported as varying from 500 to 600 daily, but the epidemic was beginning to decline. At Smyrna it

had disappeared. The mortality there was to the extent of nearly two-thirds of those attacked—2,194, out of 3,212.

The disease is progressing in Scotland, and the mortality attending it is as great as elsewhere. Up to the 7th November, 468 cases had been reported, and of these 243 had terminated fatally. On the 8th 27 cases were reported; recoveries 2; deaths 24.

In England the epidemic spreads slowly, and the mortality is not alarming. The number of cases reported as having occurred in London and its vicinity on the 8th of November, was 11, of which only three were fatal.

At New York alarm was excited by the appearance of the disease a short time since among some emigrants just arrived at Staten Island. It has not been communicated, however, and the latest papers from the city are silent on the subject.

LAWSON ON CHOLERA.

We received a few days since, a pamphlet of 58 pages, on the Nature and Treatment of Cholera, from the pen of Dr. L. M. Lawson, Professor of Materia Medica and Therapeutics and General Pathology in the Medical College of Ohio. The work is reprinted from the *Western Lancet*, and embraces a historical sketch of the disease, the causes which produce it, its mode of propagation, its pathology, prevention and medical treatment. It is a seasonable publication on a subject which is exciting anxious inquiry in all classes of the community, and concerning which physicians are expected to be maturing their views anticipative of the appearance of the epidemic. Dr. Lawson presents here a faithful digest of professional experience and observation concerning cholera, and we heartily recommend his carefully prepared work to our readers.

CONVENTION OF WESTERN MEDICAL SCHOOLS.

We earnestly hope this project will not meet with the fate that has heretofore attended similar propositions. The medical schools are contemplating lengthened sessions; but have they yet devised any expedient for keeping the students to the end of the present term? Is it not now notorious that the classes begin to break up soon after they are formed, and that many students, from mere impatience of confinement, are wend-

ing their way to their distant homes soon after the Christmas holidays? Here is an evil confessed, palpable, enormous, for which certainly it would not be difficult to devise a remedy. A convention of the western schools, there is reason to believe, would lead to the adoption of measures which would correct it. Our brethren beyond the mountains do not appear to be troubled in this way, but there can be no doubt that they would co-operate with us in the enforcement of any regulation which would advance the general cause of medical education in the country.

WEBSTER'S DICTIONARY. (Unabridged,)

Why notice Webster's Dictionary in a *medical* journal, some reader may be tempted to inquire? Our answer is, that a dictionary is an indispensable part of every physician's library, and the question is often asked us, whose shall I buy? Unhesitatingly we say, *Websters*—the unabridged edition, revised and enlarged by Chauncey A. Goodrich, and published at Springfield, Mass., for which H. W. Derby & Co., of Cincinnati, are the Western agents. We have a copy of the magnificent work on our table from the bookstore of John V. Cowling, in this city. Take it for all in all, our opinion is that no dictionary extant can compare with it.

INFLUENZA.

Influenza is almost universal in Louisville at this time. It is difficult to meet with a person who is not laboring under the affection, or has not been troubled with it. The form, however, is unusually mild, few cases requiring medication. It will occur to the minds of our readers, that influenza spread over the continent the winter before cholera made its appearance upon our shores before. Still, we have had influenza several times since without cholera.

A NEW WORK ON PARTURITION.

Professor Miller is about publishing a work on the Process of Parturition. It is already in press, and will be issued by J. V. Cowling, publisher, in February. The numerous pupils and friends of the author will be gratified at this announcement.